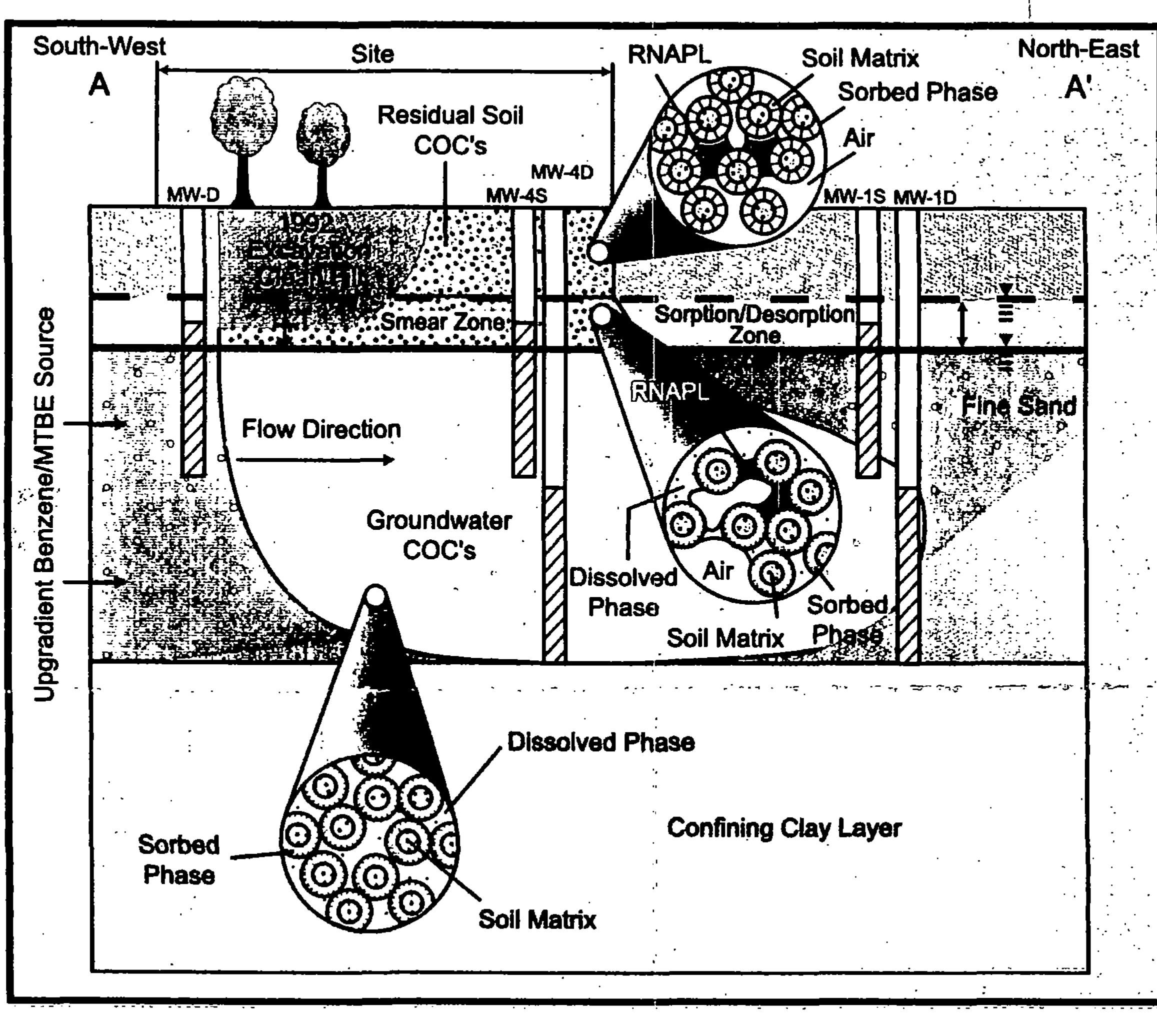
Comprehensive Data Review & Hydrogeochemical Conceptualization of the Chevron Orlando Site



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Dear Bill,

The accompanying report presents results of the March 1999 sampling event for Chevron's Orlando, Florida Superfund site, and incorporates them into a comprehensive assembly of historical data. The present report provides a revised, but preliminary, interpretation of the current data set, proposes a new site paradigm, and outlines information to be gathered over the next three semi-annual sampling events. This information will serve to evaluate the paradigm and the remedy implemented in 1992 in the context of the five year review process which will follow the October 2000 sampling event. It is expected that results of the October 1999 and March 2000 sampling events will be submitted in tabular format without elaboration. I look forward to discussing this report with you and Judie Kean of FDEP at our meeting scheduled for October 5, 1999.

I would also like to take this opportunity to note that we are currently submitting monthly status reports even though monthly site activities now involve only mowing and site maintenance. Since there is little activity on a monthly basis, I request approval to begin submitting activity reports to coincide with quarterly purge-water management and semi-annual sampling events, instead of on a monthly basis.

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Executive Summary

This document collates the historical groundwater information and integrates the information to develop a working hypothesis describing the fate and transport of constituents of concern (COCs) at the Chevron Orlando site. The Site history is recounted in Appendix A.

The analytical data demonstrate wide variability in historic post-soil removal COC groundwater concentrations (Section 4). Although there has been a general decline (20-80% over the last five years) in these compounds due to natural attenuation mechanisms (Figures 4-16 through 4-18), it was only recently that sufficient data were available to demonstrate that the oscillating COC levels (i.e., BHCs) are associated with fluctuations in the groundwater table (Figure 4-15).

This observation led to a re-examination of the extent of the plume periphery, the migration rate, and quantification of the rate of mass decrease of the COCs. The data demonstrate that although MW-5 has been the recipient of low-concentrations of BHCs (Figure 4-6) and xylene, there has been no substantive increase (beyond that associated with water level fluctuations) in concentrations over the last five years. Furthermore, there is no evidence that ethylbenzene or xylene are acting as cosolvents to enhance BHC solubility (Section 6). Although the subsurface soils are highly permeable, actual groundwater movement appears to be relatively slow due to a low hydraulic gradient (driving force) hence no COCs have been observed to date in the downgradient sentinel wells MW-12, MW-15, MW-6 and MW-11.

In addition, the centroid of BHC mass has remained within a 160-foot diameter over the last five years (Figure 4-7) demonstrating stasis of the overall plume. Finally, sampling events normalized to consistent groundwater levels show a steady decline in COC concentrations that met the criteria (10-15%) specified in the ROD during the first year of observation (Table 4-3). In summary, the data show that BTEX compounds appear to degrade readily in groundwater with less substantive reductions in BHC concentrations.

The 1992 removal actions resulted in removal of 22,680 tons of chlordane and hydrocarbon contaminated soil, but left residual BHCs in site soils that potentially act to recharge groundwater as the water table oscillates through the residual smear zone. It appears that groundwater COCs are diluted as the water table rises and concentrated with a falling water table as the smear zone drains. Nevertheless, COC natural attenuation is apparent based on aquifer conditions (reducing) that facilitate dechlorination (Section 4). In combination with the temporal and center of mass analyses, it appears that the body of the plume has been in dynamic stasis, with mass accretion being offset by mass diminution at the downgradient margins of the plume.

As a result of this reinterpretation of the data, Chevron has decided that it is necessary to:

- Expand the monitoring program to include the MW-5 cluster on a biennial basis,
- Collect additional data (e.g., daughter compounds and geochemical parameters),
- Understand the smear zone dynamics, and
- Develop a robust groundwater flow model to assess downgradient COC fate and transport mechanics.

This information will be incorporated into the 5-year review report.

1.0 Introduction

Chevron requested a complete retrospective presentation and analysis of soil and groundwater data collected over the last eight years at the Orlando site, located in Orange County, Florida (Figure 1-1). In particular, there is interest in understanding the fate and transport of site Compounds of Concern (COCs) since completion of soil excavation in 1992 (Figure 1-2), and a need to understand the soil/groundwater interactions to allow for eventual closure and disposition of the property.

The purpose of this document is to review the historical data collected at the Chevron Orlando site to date, to propose a conceptual model describing the fate and transport characteristics of COCs at the site, and to identify the short- and long-term action items to be completed in anticipation of the 5-year remediation review report due following the October 2000 sampling event.

A large body of information was consulted in preparing this report, including the:

- Contamination Assessment Report, Brown & Caldwell – December 1990
- Removal Action Plan, Brown & Caldwell – July 1991
- Removal Action Report, Brown & Caldwell – December 1992
- Remedial Investigation, TASK, PTI – November 1994, and the
- Removal Action Report Amendment, TASK – July 1994

This document focuses on interpretation of the existing data set and identification of future activities. Hence the previous data are incorporated by reference, although a brief site history is provided in Appendix A for completeness. Site hydrologic, groundwater and soil data are included in Appendices B, C, and D, respectively.

2.0 Hydrogeological Regime

Based on the accumulated data set (Appendix B), it is apparent that:

- the site surficial aquifer is not in communication with the Floridan aquifer,
- site water level elevations respond within seven days of precipitation events,
- these transient changes in the water table persist for two to six months,

- changes in water elevation have only a minimal effect on groundwater flow velocity, and
- the site flow velocity, approximately 360 feet/year, is sluggish considering that the previously estimated hydraulic conductivity of the surficial aquifer is approximately 52 feet/day with a porosity of approximately 0.25.

Thus, the site groundwater flow system is characterized by relatively rapid vertical fluctuations in response to precipitation, relatively slow lateral flow effectively independent of water level, and with a propensity for flow from the south-west to the north-east. Conceptually, the groundwater system resembles a confined basin with a slow leak in the northeastern section that slowly releases water, while the level of water in the basin rises and falls depending on the volume of recharge.

The hydrogeological system has been monitored by 29 wells at 20 individual locations both on and off site. Some wells (e.g., MW-13) are no longer functional. All monitoring wells except for MW-14 are completed within the shallow surficial aquifer, with collocated deeper and shallower wells at nine locations. The deeper wells can be identified by the suffix "D" in their well names; the shallower wells by the suffix "S". The physical properties of the wells (e.g., depth, screened interval, etc.) are summarized in Table 2-1.

3.0 Existing COC Data

Data for COC concentrations in groundwater (Appendix C) and soil (Appendix D) date back to 1990, and were documented in the Removal Action Plan and Report, amendments to the plan, and the semi-annual groundwater sampling reports. For this investigation, the available data for sample locations that could be located on a site map were compiled into a single database.

4.0 Groundwater Chemistry

Concentrations of COCs in groundwater have been measured at most sampling locations from 1991 to the present (Appendix C). The initial measurements were collected with a series of monitoring wells and hydropunch samples prior to the removal actions on site. Following the soil removal action in 1992, the monitoring well system was reconstructed in 1993 to replace those wells that had been displaced due to excavation activities. Biennial monitoring in this well network from 1995 to the present was used to evaluate natural attenuation of COCs in groundwater (Table 4-1).

4.1 Groundwater Geochemistry

Site and local groundwater is slightly acidic with a pH between 4.0 and 7.0, with the lowest pH occurring off-site in MW-6, MW-11, and MW-12. The groundwater has low concentrations of dissolved solids with an average specific conductivity (SC) of approximately 300 μmhos/cm^2. Shallow wells have a higher SC (440 μmhos/cm^2) than the deep monitoring wells (170 μmhos/cm^2).

On-site monitoring wells have low dissolved oxygen concentrations (<1 mg/L) along with reducing redox potentials (Eh<0). These reducing conditions are indicative of conditions conducive to reductive dechlorination of the BHC compounds. Distal off-site wells (MW-11, MW-12, MW-15) also have relatively low dissolved oxygen concentrations but in contrast, have oxidizing redox potentials (Eh>150). Dissolved iron concentrations are consistent with the measured Eh values, with on-site wells having higher concentrations of reduced ferrous iron (Fe^{+2}>0.5 mg/L) while distal wells have <0.2 mg/L. Reducing conditions also appear to be stronger in the deeper monitoring wells than in the collocated shallow wells.

4.2 Groundwater COC Trends

Trends in groundwater COC concentrations were investigated from three perspectives:

- spatial extent and lateral migration of groundwater COCs,
- plume stability, and
- temporal variability of groundwater COC concentration data.

Historically, COCs have been detected in groundwater at most on-site wells and three off-site locations (MW-1S and MW-1D, MW-2D, and MW-5D). The on-site exception is MW-14 completed at depth in the Floridan aquifer where COCs have not been detected. COCs have also not been found at other off-site wells including MW-2S, MW-5S, MW-6S, MW-6D, MW-11, MW-12, and MW-15 (Table 4-2). In terms of the presence or absence of COCs, historical data agree with more recent sampling events. COCs appear in groundwater throughout the site area, and immediately off-site only as far north as MW-2 and MW-5 (Figures 4-1 through 4-5), where they occur in the deeper monitoring wells. Their lateral extent is constrained in the downgradient directions by MW-6 to the north, MW-11 and MW-15 to the northeast, and MW-12 to the east. Vertically, analytical results from MW-14, a Floridan aquifer monitor well located in the center of on-site groundwater COC concentrations (Figure 1-2), shows that COCs are confined to the surficial aquifer.

Based on the spatial extent of groundwater COCs, the perimeter of the affected groundwater region has not varied substantially since sampling of the current monitoring well network commenced in September 1993. Indeed, even in MW-5D, there have been low concentrations of BHC-isomers detected since 1995 (Figure 4-6). To further evaluate the potential flux of COCs to the downgradient margin, migration was investigated by determining the spatial disposition of the center of COC mass within the body of the plume.

The proclivity for COC plume migration was determined by calculating the center of mass for groundwater COCs based on the available monitoring well data collected since September 1993. Groundwater data for each individual sampling event was kriged using the Environmental Visualization System (EVS; C-Tech 1999) in order to derive estimates for COC concentrations throughout the entire groundwater perimeter. The location of the center of mass was then calculated following the method of Mizrahi and Sullivan, 1986, i.e.,

$$m = \iiint c(x,y,z)\,dV$$

$$\ddot{x} = \frac{1}{m}\iiint x \cdot c(x,y,z)dV$$

$$\ddot{y} = \frac{1}{m}\iiint y \cdot c(x,y,z)dV$$

$$\ddot{z} = \frac{1}{m}\iiint z \cdot c(x,y,z)dV$$

where:

(x,y,z) are the easting, northing, and depth coordinates respectively,

$(\ddot{x}, \ddot{y}, \ddot{z})$ is the coordinate for the center of mass,

m is the total mass of COCs in the system, and

dV is the volume element for the integration.

The calculations show that the center of mass for β-BHC is consistently located between monitoring well locations MW-4 and MW-10 (Figure 4-7). The precise location of the center of mass varies; however, there is no trend to the locus, hence it appears that the plume is oscillating backwards and forwards rather than migrating downgradient towards the perimeter wells. For xylene, the center of mass is slightly offsite (Figure 4-8), however, similar to β-BHC it remains consistent over time, demonstrating no net migration of xylene further downgradient from the source area.

Cross-sections from southwest to northeast across the site also demonstrate the spatial stability of the groundwater COCs (Figures 4-9 and 4-10). In these cross sections, COC concentrations in on-site monitoring wells fluctuate, with peak concentrations consistently located at MW-4. COC concentrations at MW-1 also fluctuate but do not exhibit any clear trends associated with plume migration. Distal wells upgradient (MW-8) and downgradient (MW-15 and MW-11) are stable with COC concentrations below method detection limits.

4.3 Historical COC Concentrations

Monitoring wells have been sampled up to 17 times since October 1991, with the bulk of the existing monitoring network in place since September 1993. Monitoring well data for COCs in a typical well have exhibited temporal variability over that time period (Figures 4-11 through 4-14). This variability has complicated interpretation of COC concentrations until recently when a sufficient number of sampling results had been accumulated and evaluated to characterize the site's relatively slow moving groundwater system.

Over the past eight years since on-site soil removal, there has always been clear evidence of BTEX solute reduction with decreased concentrations in offsite wells (e.g., MW-2D; Figure 4-11) and in wells located adjacent to the removal action (e.g., MW-3S, MW-3D and MW-8S). In other wells (e.g. MW-4D), solute behavior is more complex with oscillating concentrations superimposed on an overall declination in BTEX concentrations (Figure 4-12)

Examination of the BHC isomers shows similar patterns (a consistent decrease) in some cases (e.g., MW-2D; Figure 4-13), and oscillating concentrations in other wells (e.g., MW-4D) distal to the removal action (Figure 4-14). Despite the overall decrease in COC concentrations, the reason for the historic variability in solute concentrations (especially the BHC-isomers) only recently became apparent with the accumulation of a substantial data set. Historical data for all wells are presented in Appendix C.

As additional sampling events consolidated the groundwater system characterization, a statistically significant correlation ($p>0.99$) between average total BHC concentrations and depth to water level was identified (Figure 4-15), suggesting that the rise and fall observed in site water levels controls groundwater BHC concentrations. Other temporally related changes (e.g., potential lateral flow, natural attenuation, etc.) appear to be less important. The correlation with depth to water is less significant for BTEX compounds because average concentrations of these COCs have shown clear degradation over time.

This realization implies that COC concentrations, in particular the BHC-isomers, must be examined in conjunction with water level elevations in order to achieve an accurate interpretation. Hence, an increase in groundwater COC concentrations between consecutive sampling events is not necessarily indicative of plume migration, nor is a decrease between consecutive sampling events necessarily evidence of natural attenuation.

Having identified the cause of the short-term temporal variability, the long-term trends in the data demonstrative of COC migration and/or natural attenuation were effectively examined by removing that variability. This was achieved by comparing analytical results from samples collected at similar water levels. For example, the average site water level was similar (+/- three inches) for the September 1993, April 1995, May 1996, March 1997, and October 1997 sampling events.

The strong correlation relationship between COC concentrations (particular BHC-isomers) and the groundwater elevation suggests an alternative interpretation of COC diminution is more appropriate than comparing COC analytical results from consecutive sampling events. Comparing analytical results at similar water levels demonstrates a consistent decrease in COC concentrations (Figures 4-16 through 4-18) between post-removal actions (1993) and the most recent consistent water table measurements (October 1997). Comparing COCs, the rate of decrease for the total BHC-isomers is slower (approximately 5% per annum from September 1993 to October 1997) compared to the rate of decrease for BTEX compounds (approximately 30% per annum from September 1993 to October 1997). Sampling events subsequent to October 1997 show a continued decrease in COC concentrations, however, these events were conducted at varying water level elevations.

4.4 Temporal Decrease in COC Concentrations

The Record of Decision (ROD) required that groundwater COC concentrations decrease by 10-15% from April 1995 to May 1996. Comparing average analytical results between April 1995 to February 1996 (the relevant compliance interval) across the monitoring well network shows that COC concentrations declined by up to 57% (Table 4-3). Xylene appears to increase by 5%, however, this interpretation appears anomalous due largely to values observed in MW-8 in February 1996.

The calculation of changes in COC concentrations between April 1995 and February 1996 in this manner (Table 4-3) does not account for groundwater variability and was conducted to put COC concentrations in the ROD context. Future evaluation of long-term COC trends should include consideration of variability induced by changes in water level (see Section 4.3 above) in assessing the efficacy of natural attenuation.

4.5 Disposition of COC Plumes

The location and extent of the groundwater plume was determined for a number of constituents including α-BHC, β-BHC, γ-BHC, ethylbenzene and xylene. These data show that the plume remains confined almost entirely within the site boundary despite nearly 40 years of operation. Hence it is apparent that there are attenuation factors (hydraulic, geochemical and biochemical, etc.) that have acted to minimize the effect of historically uncontrolled releases, and have therefore curtailed the COC distribution in the environment.

5.0 Soil Data

The 1992 removal action was designed to remove soil with chlordane concentrations >50 mg/kg in surficial soil (0- to 1-foot below land surface) and >100 mg/kg in subsurface soil. Chlordane was suggested as the indicator chemical to guide the removal action by ATSDR, based on its wide-spread distribution across the site, and elevated concentrations. Therefore, while analytical data were compiled for COCs subsequently identified in the 1994 RI/FS, soil concentrations of these compounds had no bearing on the Removal Action soil excavation. The soil data for the site collected between 1990-1994 as part of the removal action and the RI/FS were used to:

- identify the extent of the soil removal,
- confirm that the soil removal met the remedial objectives, and

- quantify site-specific fate and transport parameters.

While the removal action met the remedial objectives at that time, residual concentrations of COCs remained in site soils, primarily on the eastern section of the site, and in a narrow strip of soil along the northwestern property boundary (analytical data in Appendix D). Consequently, on-site post-removal soils contained up to 22 mg/kg of total BHC-isomers and up to 510 mg/kg of total BTEX compounds. Although residual COC concentrations in some of these soils do not exceed numerical standards adopted for the site remedial action, it is possible that they act as sources to groundwater. However, based on the site conceptual model (Section 7), it is unclear at this time what contribution these residual soil COCs make to groundwater.

6.0 COC Fate and Transport

The migration of COCs is dependent on:

- groundwater flow rate and direction,
- site groundwater recharge,
- the sorption/desorption properties of COCs in the shallow aquifer,
- degradation of COCs, and
- the potential for cosolvency

The rate and direction of groundwater flow is dictated by the hydraulic gradient across the site. The magnitude of the gradient has remained consistently low over the duration where water level data have been collected. The geochemical studies conducted to this point will be the subject of detailed analysis in the ensuing 5-year review report. There are two outstanding issues that warrant further discussion, 1) cosolvent transport of COCs, and 2) recent advances in the field of Monitored Natural Attenuation (MNA).

6.1 Potential Cosolvency

Co-solvency results when sufficiently large quantities of organic solvent in groundwater increase the solubility and desorption of solute organic chemicals. For example, in a solution that contains water and a solvent, such as xylene, the solubility of an organic chemical, such as DDT, can be increased due to the combination of water and solvent in the cavity that results in shared hydration shells. Such a condition exists when the solvent is present at greater than 10-20% by volume (LaGrega *et al.*, 1994; Schwarzenback *et al.*, 1993). As the quantity of the organic chemicals decreases (less than 10^{-3} volume fraction), there is extremely low probability of the hydration shells overlapping, and thus little affect on the solubility (Schwarzenbach et al., 1993).

Conversely, solute sorption to soils decreases in the presence of large quantities of solvent due to several factors, including competition for sorption sites, removal of organic matter (the primary sites for sorption), and physical alteration of soil, thereby changing flow patterns and bypassing sorption sites (LaGrega et al., 1994). The volume percent of a chemical is calculated by dividing the chemical concentration in groundwater by the specific gravity of that chemical. The volume percent of organic chemicals at the Orlando site ranges from 0.0000003% to 0.00068% (Table 6-1), which is far less than the 10-20% required for cosolvency (Schwarzenbach et al. 1993). Therefore in Orlando groundwater, the potential for co-solvency is negligible, due to the low concentrations of the COC cosolvents (Table 6-1).

6.2 Evidence of Natural Attenuation

According to the U.S. EPA (1997b), natural attenuation processes include physical, chemical, or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. These in situ processes include degradation (both biotic and abiotic), advection, dispersion, dilution, sorption, volatilization, and other chemical reactions.

Advection is the average movement of groundwater in the direction of flow that functions to spread the centroid of the solute mass in a downgradient direction. Hydrodynamic dispersion and diffusion transport mechanisms act to further spread the solute mass cross- and down-gradient in the aquifer. Sorption is a significant attenuation mechanism for many of the COCs because their movement through the subsurface will be retarded relative to groundwater flow due to their low water solubility and affinity for partitioning from water to soil particles and the sluggish nature of the groundwater system. Abiotic chemical reactions, such as hydrolysis, may also serve to reduce COC mass.

The available data suggest that there is "moderate evidence" for natural attenuation when incorporated into a modified form of the Natural Attenuation Score Sheets developed by the EPA for chlorinated solvents (Table 6-2). These scoresheets represent a useful template for application to other situations where MNA for other chlorinated compounds must be evaluated (Davis et al. 1999). Much of the data that would complete the natural attenuation scoring has not been collected previously, thus the scores (Table 6-2) represent a lower bound on the actual natural attenuation scores.

7.0 Integrated Site Paradigm/Conceptual Model

The data analysis described previously has led to development of an integrated site paradigm based on the complete body of available data (Figure 7-1). The working hypothesis is consistent with the presence of known residual soil COC sources, storm water infiltration and groundwater flow, and natural attenuation mechanisms that act to constrain downgradient COC transport.

The residual soil COCs may be sorbed to soil particles or may exist as an entrained liquid consisting of free-phase product in an area within and beneath the Removal Action perimeter. The vertically oscillating on-site groundwater concentrations in site wells suggest that there may be ganglia of residual non-aqueous phase liquid (RNAPL) entrained in the pore space in the vadose zone (Figure 7-1). Where the groundwater migrates vertically through the area, it is possible that historical free drainage of RNAPL created a smear zone in areas of the site that were not previously excavated for chlordane, but that contain other constituents of interest from a groundwater perspective.

The vertical oscillation in the groundwater table potentially solubilizes the COCs entrained within the RNAPL, however, the carrier solvents (e.g., ethylbenzene and xylene) are constrained from mass migration because they do not exceed residual levels of partial saturation in the vadose zone, hence cannot physically migrate through the system. While cosolvency can be eliminated as a transport mechanism, there may be ongoing dissolution of COCs from the hypothesized RNAPL to the underlying groundwater.

Although water levels respond rapidly to precipitation events, the overall hydraulic gradient of the site is very low (Appendix B). Therefore, groundwater flow is relatively slow (approximately 360 feet/year) despite the relatively high permeability of the shallow aquifer (52 feet/day). However, if COCs were to have migrated unattenuated, we would have expected to observe them at all downgradient monitoring wells by this time. Therefore, COC migration downgradient from the site appears to be balanced by natural attenuation processes, e.g., dechlorination in the reduced onsite groundwater environment, and hydrodynamic dispersion and sorption offsite that acts to continually diminish COC concentrations downgradient from the site. It is also possible that there is a zone of reduced permeability downgradient that acts to reduce flow rates from the site to downgradient receptors. In combination with the temporal and center of mass analyses, it appears that the body of the plume has been at dynamic stasis during the period of monitoring, with the mass accretion being offset by mass diminution at the downgradient margins of the plume.

8.0 Conclusions and Further Investigation

Based on the data review described above, the following conclusions can be drawn:

1. historic and current analytical water quality data show that the spatial extent of groundwater COCs has not reached the downgradient sentinel wells,

2. monitoring wells that currently detect COCs have also detected COCs throughout their history,
3. the groundwater system is sluggish, hence transport of groundwater COCs is slow,
4. variability in observed groundwater COC concentrations is attributable to fluctuations in the water table elevation,
5. residual COCs in the soils on site have the potential to contribute COCs to groundwater,
6. natural attenuation at the plume margins constrains downgradient migration, and
7. there are upgradient off-site sources (e.g., benzene and MTBE) of some constituents that are influencing analytical water quality on site.

These conclusions are all pertinent to the ultimate questions associated with the site, namely "Is monitored natural attenuation effectively protective of human health?"

The first conclusion recognizes that the spatial extent of the groundwater COCs has been successfully delineated. Conclusions 2 and 3 provide evidence that the current groundwater condition has been at dynamic stasis. The fourth conclusion recognizes that spot checking soil and groundwater analytical data is not a valid means for decision-making in regards to the effectiveness of MNA. The fifth conclusion suggests that additional loading of COCs into the groundwater system may complicate assessment of MNA as an effective remedy. Conclusions 2, 3, and 6 provide evidence that MNA may have effectively limited the migration of groundwater COCs beyond the current condition. The seventh conclusion identifies compounds present in the system (e.g., benzene and MTBE) that are not a result of site activities, and therefore, should not be considered in assessing the effectiveness of MNA.

To further evaluate the robustness of the conceptual paradigm the following investigations are being considered to provide additional data for the five-year ROD review which will follow the October 2000 sampling event:

- expanded monitoring well sampling,

- expanded analyte lists, including selected COC daughter products and dissolved gases to better document the extent of COC degradation,
- additional hydropunch sample collection and analysis to assess the relationship of groundwater quality to potential remaining sources areas,
- additional precipitation and water level data collection to confirm the recharge-groundwater flow relationship,
- three-dimensional flow and transport modeling to assess future groundwater conditions under various scenarios, and
- updated risk assessment to provide a human health perspective on the effectiveness of MNA.

8.1 October 1999 Sampling Event

The collection of these data will be described in a forthcoming work plan to be at a meeting scheduled for October 5, 1999. For example, we anticipate collecting geochemical data and daughter compounds in selected wells to further enhance assessment of the efficacy of MNA, adding well cluster MW-5 to the monitoring well network, and possible installation of soil borings at strategic locations on site to evaluate the Residual Non-Aqueous Phase Liquid Smear Zone hypothesis.

8.2 Development of the Fate and Transport Model

A model will be developed to evaluate the source/receptor relationship and to evaluate the incremental benefit of excavating additional soil. The model package (Davis et al. 1997) will be structured to accommodate modules that simulate the fate and transport of compounds in soil and groundwater. A kriging module (EVS; C-Tech 1999) will be used to determine 3-dimensional chemical distribution in the vadose zone, and the output will be interfaced with the vadose zone transport model HYDRUS_2D (Simunek et al. 1996) to model transport of contaminants through the unsaturated zone to the groundwater table. The solute transport will be coupled with a velocity field from a calibrated FEFLOW (Diersch 1998) groundwater flow model, and used to simulate migration of chemicals through the aquifer to downgradient locations (Figure 7-1). The predicted groundwater concentrations at each observation well will then be compared with the corresponding Maximum Contaminant Levels (MCLs) or risk-based action levels, and the effect of both prior and additional soil removal evaluated.

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TABLES

Table 2-1. Physical Properties of the Chevron Orlando, Florida Site Monitoring Wells

Well ID	Easting	Northing	Constructed By	Total Depth (feet)	Depth Below Land Surface (feet)	Construction Material	Screened Interval (feet)	Top of Casing Elevation Feet MSL 1998 (feet MSL, measured 1998)
MW-1D	525361	1543920	Brown and Caldwell	30	30	Stainless Steel	20-30	100.89
MW-1S	525357	1543926	Brown and Caldwell	15	15	Stainless Steel	5-15	100 93
MW-2D	524991	1543931	Brown and Caldwell	29	29	Stainless Steel	19-29	99.16
MW-2S	524990	1543939	Brown and Caldwell	15	15	Stainless Steel	5-15	99.11
MW-3D	524939	1543767	TASK Environmental	32	29	Stainless Steel	22-32	101.65
MW-3S	524944	1543768	TASK Environmental	17	14	Stainless Steel	7-17	101.82
MW-4D	525197	1543728	Brown and Caldwell	32	29	Stainless Steel	22-32	101.93
MW-4S	525200	1543730	Brown and Caldwell	18	15	Stainless Steel	8-18	102.51
MW-5D	525282	1544091	TASK Environmental	29.5	29.5	Stainless Steel	19.5-29.5	100.81
MW-5S	525280	1544085	TASK Environmental	15	15	Stainless Steel	5-15	101.24
MW-6D	525209	1544246	TASK Environmental	30	30	Stainless Steel	20-30	99.69
MW-6S	525205	1544243	TASK Environmental	15	15	Stainless Steel	5-15	99.8
MW-7D	524795	1543735	TASK Environmental	32	29	Stainless Steel	22-32	102.27
MW-7S	524790	1543736	TASK Environmental	17	14	Stainless Steel	7-17	100.05
MW-8D	524975	1543574	TASK Environmental	31.5	28.5	Stainless Steel	21.5-31.5	103.04
MW-8S	524979	1543575	TASK Environmental	17	15	Stainless Steel	7-17	102.17
MW-9D	525030	1543463	TASK Environmental	31	28	Stainless Steel	21-31	102.59
MW-10D	525212	1543533	TASK Environmental	30	27	Stainless Steel	20-30	104 35
MW-10S	525212	1543526	TASK Environmental	17	14	Stainless Steel	7-17	103.31
MW-11	525700	1544240	TASK Environmental	20	20	Stainless Steel	10-20	96 24
MW-12	525619	1543869	TASK Environmental	20	20	Stainless Steel	10-20	97.95
MW-13	525701	1543664		20	20		10-20	98.42
MW-14	525184	1543727	TASK Environmental	94	91	Stainless Steel	82-94	102.07
MW-15	525534	1544083	TASK Environmental	20	20	Stainless Steel	10-20	99.21
MW-16D	525345	1543723	TASK Environmental	32	29	Stainless Steel		103.7
MW-16S	525347	1543728	TASK Environmental	20	17	Stainless Steel	7-17	104.03
MW-17	525186	1543602	TASK Environmental	20	17	Stainless Steel		103 23
MW-A	525417	1543467	Brown and Caldwell	20	17	PVC	10-20	105.01
MW-D	524802	1543477	Brown and Caldwell	20	17	PVC	10-20	102.96
MW-P	525352	1543738	Brown and Caldwell	25	22	PVC	15-25	104.03

Table 4-1. Groundwater Analytes

Analyte Suites	*EPA Method*
purgeable aromatic compounds	8010
purgeable halocarbon compounds	8020
semi-volatile organic compounds	8270
chlorinated pesticides	8080
organophosphate pesticides	8141
arsenic, chromium, and lead	6010

Indicator Parameters

pH	specific conductivity
temperature	alkalinity
dissolved oxygen	oxidation-reduction potential (Eh)
nitrate	sulfate-sulfide concentrations
iron(II) concentrations	total organic carbon
biochemical oxygen demand	chemical oxygen demand

Detected Organic Compounds Included in the Analyte Suites

DDD	DDE
Alpha-BHC	Aldrin
Beta-BHC	Chlordane
Delta-BHC	Dieldrin
Endrin	Gamma-BHC (lindane)
Bis (2-ethylhexyl) phthalate	Naphthalene
1,4-Dichlorobenzene	Benzene
Bromodichloromethane	Bromoform
Chloroform	Ethylbenzene
Xylenes	1,2,4-Trichlorobenzene
1,4-Dichlorobenzene	1-Methylnaphthalene
2-Methylnapthalene	Diethyl phthalate
Fluorene	Carbon tetrachloride
Chlorobenzene	MTBE
Toluene	1,1,2-Trichloroethane
1,1-Dichloroethylene	1,2-Dichlorobenzene
1,2-Dichloroethane	1,2-Dichloropropane
1,3-Dichlorobenzene	Methylene chloride
Heptachlor epoxide	

Table 4-2. Summary of Constituent of Concern Detections in Monitoring Wells
(D = detected concentrations above method detection limit; X = exceedance of ROD cleanup standard)

Well	Alpha-BHC	Beta-BHC	Gamma-BHC	Chlordane	DDD	Benzene	Ethylbenzene	Xylene	Napthalene
MW-1S	X	X				X	X	X	D
MW-1D	X	X				X	X	X	D
MW-2S	D	D						D	
MW-2D	X	X				X	X	X	D
MW-3S	X	X	D	X	X	X	X	X	D
MW-3D	X	X				X	X	X	D
MW-4S	X	X	X			X	X	X	D
MW-4D	X	X				X	X	X	D
MW-5S									
MW-5D	D	X				D	X	X	
MW-6S									
MW-6D									
MW-7S		D		X					
MW-7D		D					D	X	
MW-8S	X	X	D	D	X	X	D	X	X
MW-8D	X	D				X	D	X	D
MW-9D	X	X			X	X	D	D	
MW-10S	X	X	X	X	X	X			
MW-10D	X	X	X			X	D	D	
MW-11									
MW-12					D				
MW-14									
MW-15									
MW-16S	X	X	X			X		D	
MW-16D	X	X	X		X	X	D	D	
MW-17	X	X	X			X	X	X	D

Table 4-3. Groundwater COC Concentration Change between April 1995 and February 1996
(concentrations in ug/L)

COC	ROD Clean-up Standard	Average[1] Concentration April 1995 (post-removal)	Average[1] Concentration February 1996 (post-removal)	Percent Change in Average Concentration
Alpha-BHC	0.05	2.08	1.33	-36%
Beta-BHC	0.1	5.53	2.39	-57%
Gamma-BHC	0.2	0.37	0.35	-5%
Chlordane	2	2.97	2.21	-26%
Benzene	1	4.46	2.03	-54%
Ethylbenzene	30	57.67	48.82	-15%
Xylene	20	137.74	144.54	+5%

[1]The average value was calculated from monitoring wells MW-1S, MW-1D, MW-2S, MW-2D, MW-3S, MW-3D, MW-4S, MW-4D, MW-5S, MW-5D, MW-7S, MW-7D, MW-8S, MW-8D, MW-9D, MW-10S, MW-10D, and MW-P

Table 6-1. Co-Solvency Calculation for COCs

Parameter	Maximum Detected Concentration (ug/L)	Specific Gravity	Volume Percent
a-BHC	20	1.37	0.000001%
b-BHC	70	1.37	0.000005%
g-BHC	15	1.87	0.000001%
Chlordane	20	1.61	0.000001%
DDD	3.3	1.03	0.0000003%
Benzene	23	0.879	0.000003%
Ethylbenzene	2000	0.866	0.000231%
Xylenes	5900	0.870	0.000678%

Table 6-2. EPA Score Sheets for Evidence of Natural Attenuation

Well ID	Date	Dissolved Oxygen mg/l	Nitrate mg/l	Fe 2+ mg/l	Sulfate mg/l	Sulfide mg/l	Methane mg/l	Eh mV	pH	Total Organic Carbon mg/l	Temperature °C	Alkalinity mg/l	BTEX mg/l
MW-10D	9/1/93												0.012
MW-10D	4/1/94	0.24		1.5									
MW-10D	4/1/95												0.027
MW-10D	10/1/95												0.008
MW-10D	2/1/96												0.004
MW-10D	5/1/96												0.004
MW-10D	9/1/96												0.004
MW-10D	12/1/96	0.57	<1	0.73	17			304.3	5.2	22	24.5	11	0.006
MW-10D	3/1/97	0.38	<1	0.63	18		<0.001	25.7	4.5	21	24.6	7	0.004
MW-10D	10/1/97	0.38	0.02	0.64	18.4	<0.2		85.4	4.9	25.4	25.5	10	0.007
MW-10D	3/1/98	0.29		0.51				110.6	5.1		23.4		0.005
MW-10D	3/18/98		0.02		28.5	<1				13.4		20	
MW-10D	10/1/98	0.33		0.68				48	4		25.6		0.007
MW-10D	10/13/98		<0.02		14.8	<1				19.2		6	
MW-10D	3/1/99	0.25	<0.1	0.42	15	2		243.4	4.8	27	24.7	13	0.008
Average		0.35	0.36	0.7	19	<1.05	<0.001	136	4.8	21	25	11	0.008
Points		3	2	0	2	0	0	0	-2	2	1	0	0
Total Points	**8**		**Limited Evidence**										

Table 6-2. EPA Score Sheets for Evidence of Natural Attenuation

Well ID	Date	Dissolved Oxygen mg/l	Nitrate mg/l	Fe 2+ mg/l	Sulfate mg/l	Sulfide mg/l	Methane mg/l	Eh mV	pH	Total Organic Carbon mg/l	Temperature °C	Alkalinity mg/l	BTEX mg/l
MW-10S	9/1/93												0.001
MW-10S	4/1/95												0.009
MW-10S	10/1/95												0.003
MW-10S	2/1/96												0.003
MW-10S	5/1/96												0.004
MW-10S	9/1/96												0.005
MW-10S	12/1/96	0.79	<1	0.16	79			214.4	5.7	29	25	17	0.004
MW-10S	3/1/97	0.55	<1	0.17	65		<0.001	164.2	5.3	9	23.6	16	0.002
MW-10S	10/1/97	0.5	0.22	0.21	15.9	0.4		184.8	5.3	14.9	26.5	15	0.003
MW-10S	3/1/98	1.53		0				159.8	5.6		22.2		0.001
MW-10S	3/18/98		2.04		47.6	<1				24		24	
MW-10S	10/1/98	1.16		0.1				276.6	4.6		27.2		0.003
MW-10S	10/13/98		2.1		55.1	<1				16		112	
MW-10S	3/1/99	0.81	0.6	0.13	50	<1		261.9	5	32	24.2	47	0.001
Average		0.89	1.2	0.1	52	0.9	<0.001	210	5.25	21	25	39	0.003
Points		0	0	0	0	0	0	0	0	2	1	0	0
Total Points	**3**		**Inadequate evidence**										

Table 6-2. EPA Score Sheets for Evidence of Natural Attenuation

Well ID	Date	Dissolved Oxygen mg/l	Nitrate mg/l	Fe 2+ mg/l	Sulfate mg/l	Sulfide mg/l	Methane mg/l	Eh mV	pH	Total Organic Carbon mg/l	Temperature °C	Alkalinity mg/l	BTEX mg/l
MW-4D	10/2/91												1.487
MW-4D	4/2/93												0.633
MW-4D	9/1/93												0.652
MW-4D	4/1/94	0.5		1.08		9.2		2	5.2				
MW-4D	4/1/95												1.491
MW-4D	10/1/95												0.815
MW-4D	2/1/96												0.575
MW-4D	5/1/96												1.236
MW-4D	9/1/96												1.007
MW-4D	12/1/96	0.3	<1	0.76	34			-10.4	5.2	69	25	<5	0.999
MW-4D	3/1/97	0.5	<1	0.83	32		0.016	-19.5	5.3	60	23.7	<5	0.888
MW-4D	10/1/97	0.9	<0.01	0.83	27.8	2.1		36.9	5.2	60.7	24.3	599	0.408
MW-4D	3/1/98	0.63		0.86				74	5		23.3		0.345
MW-4D	3/20/98		<0.02		25.2	6.56				49		<1	
MW-4D	10/1/98	0.72		1.8				-96.5	5		24.3		0.467
MW-4D	10/14/98		0.11		<2.4	1.2				65		18	
MW-4D	3/1/99	0.31	<0.1	1.33	57	11		72.2	4.8	76	24.1	<1	0.816
Average		0.55	0.37	1.1	30	6.0	0.016	8.4	5.1	63	24	105	0.84
Points		0	2	3	0	3	0	1	0	2	1	0	2
Total Points	**14**		**Limited Evidence**										

Table 6-2. EPA Score Sheets for Evidence of Natural Attenuation

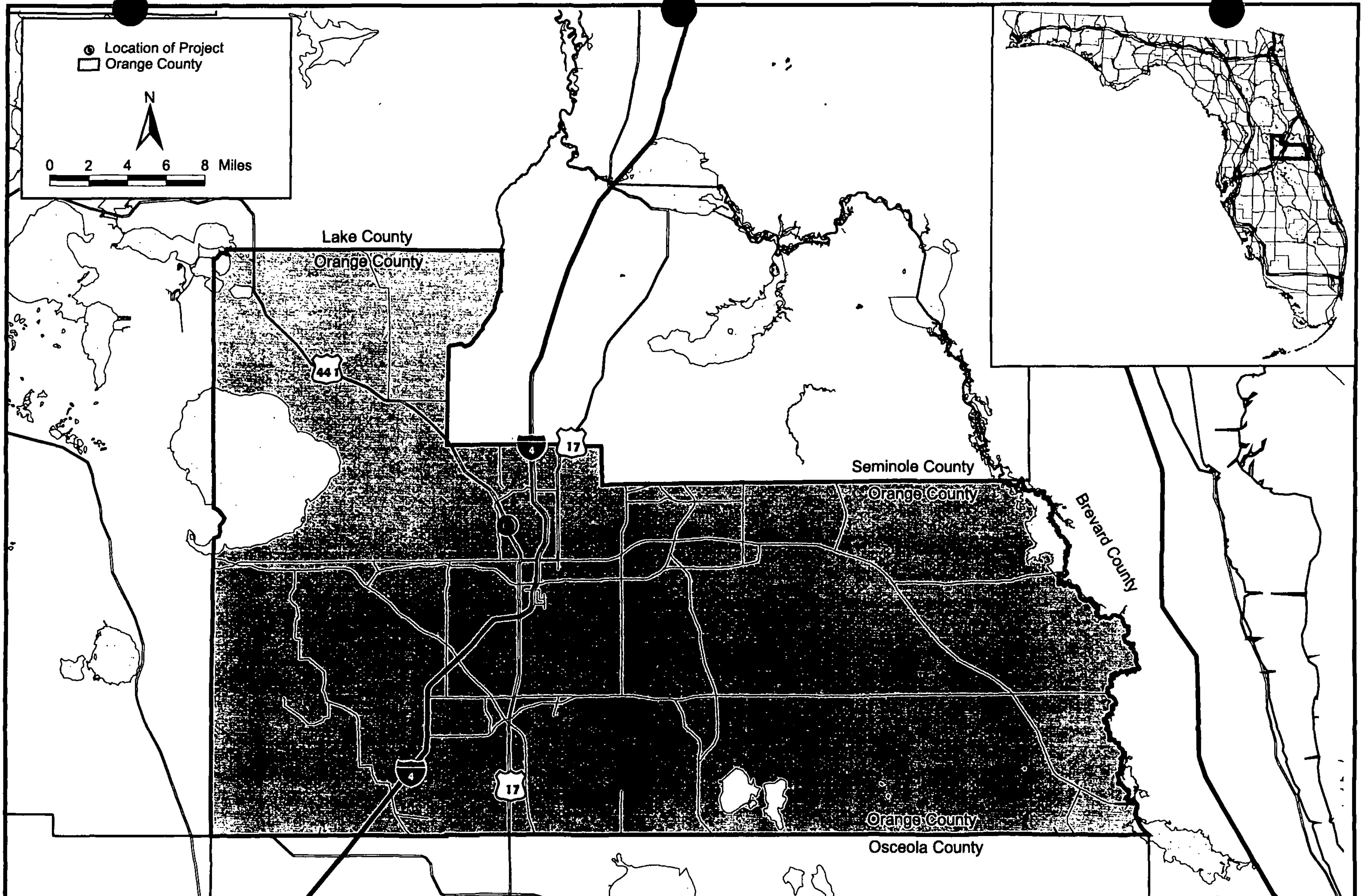
Well ID	Date	Dissolved Oxygen mg/l	Nitrate mg/l	Fe 2+ mg/l	Sulfate mg/l	Sulfide mg/l	Methane mg/l	Eh mV	pH	Total Organic Carbon mg/l	Temperature °C	Alkalinity mg/l	BTEX mg/l
MW-4S	10/2/91												0.007
MW-4S	4/2/93												0.056
MW-4S	9/1/93												0.651
MW-4S	4/1/94	0.7		0.4		4.6		-31	6.13				
MW-4S	4/1/95												0.218
MW-4S	10/1/95												0.013
MW-4S	2/1/96												0.015
MW-4S	5/1/96												0.044
MW-4S	9/1/96												0.010
MW-4S	12/1/96	0.4	<1	0.35	160			-15.9	5.5	30	25	87	0.041
MW-4S	3/1/97	0.61	<1	0.17	110		0.016	-60.7	5.9	29	23.4	120	0.050
MW-4S	10/1/97	0.91	<0.01	0.13	20.2	1.5		20.2	5.8	27	25.1	89	0.043
MW-4S	3/1/98	0.63		0.47				105.5	5.7		21.3		0.012
MW-4S	3/20/98		0.03		60.4	<1				18.6		70	
MW-4S	10/1/98	1.09		0.63				-67	5.5		25.6		0.019
MW-4S	10/14/98		0.11		278	<1				40		46	
MW-4S	3/1/99	1.01	<0.1	0.07	72	6		144.6	5.6	41	23.8	100	0.118
Average		0.76	0.38	0.3	117	2.8	0.016	14	5.7	31	24	85	0.093
Points		0	2	0	0	3	0	1	0	2	1	0	2? (close to 0.1)
Total Points	**9-11**		**Limited Evidence**										

Table 6-2. EPA Score Sheets for Evidence of Natural Attenuation

Well ID	Date	Dissolved Oxygen mg/l	Nitrate mg/l	Fe 2+ mg/l	Sulfate mg/l	Sulfide mg/l	Methane mg/l	Eh mV	pH	Total Organic Carbon mg/l	Temperature °C	Alkalinity mg/l	BTEX mg/l
MW-1D	10/1/91												0.590
MW-1D	4/1/93												0.869
MW-1D	9/1/93												0.329
MW-1D	4/1/94	0.3		1.25		9.3		17	5.06				
MW-1D	4/1/95												0.104
MW-1D	10/1/95												0.159
MW-1D	2/1/96												0.812
MW-1D	5/1/96												0.919
MW-1D	9/1/96												0.444
MW-1D	12/1/96	0.2	<1	1.04	46			-45.1	5.3	43	25	<5	0.404
MW-1D	3/1/97	0.57	<1	0.76	13		0.0067	-31.3	5.4	39	24.7	<5	0.558
MW-1D	10/1/97	0.35	<0.01	0.75	48.4	<0.2		22.7	5.3	41.1	25.4	28	0.697
MW-1D	3/1/98	0.37		0.64				30.2	5.3		23.8		1.689
MW-1D	3/19/98		<0.02		41.4	1.66				34.1		10	
MW-1D	10/1/98	0.66		0.55				-59	4.9		25		0.687
MW-1D	10/14/98		<0.02		47	2.6				28.8		22	
MW-1D	3/1/99	0.72	<0.1	0.66	83	11		155.1	4.9	45	25	6	0.749
Average		0.45	0.36	0.8	46	5.0	0.007	13	5.2	39	25	13	0.644
Points		3	2	0	0	3	0	1	0	2	1	0	2
Total Points	**14**		**Limited Evidence**										

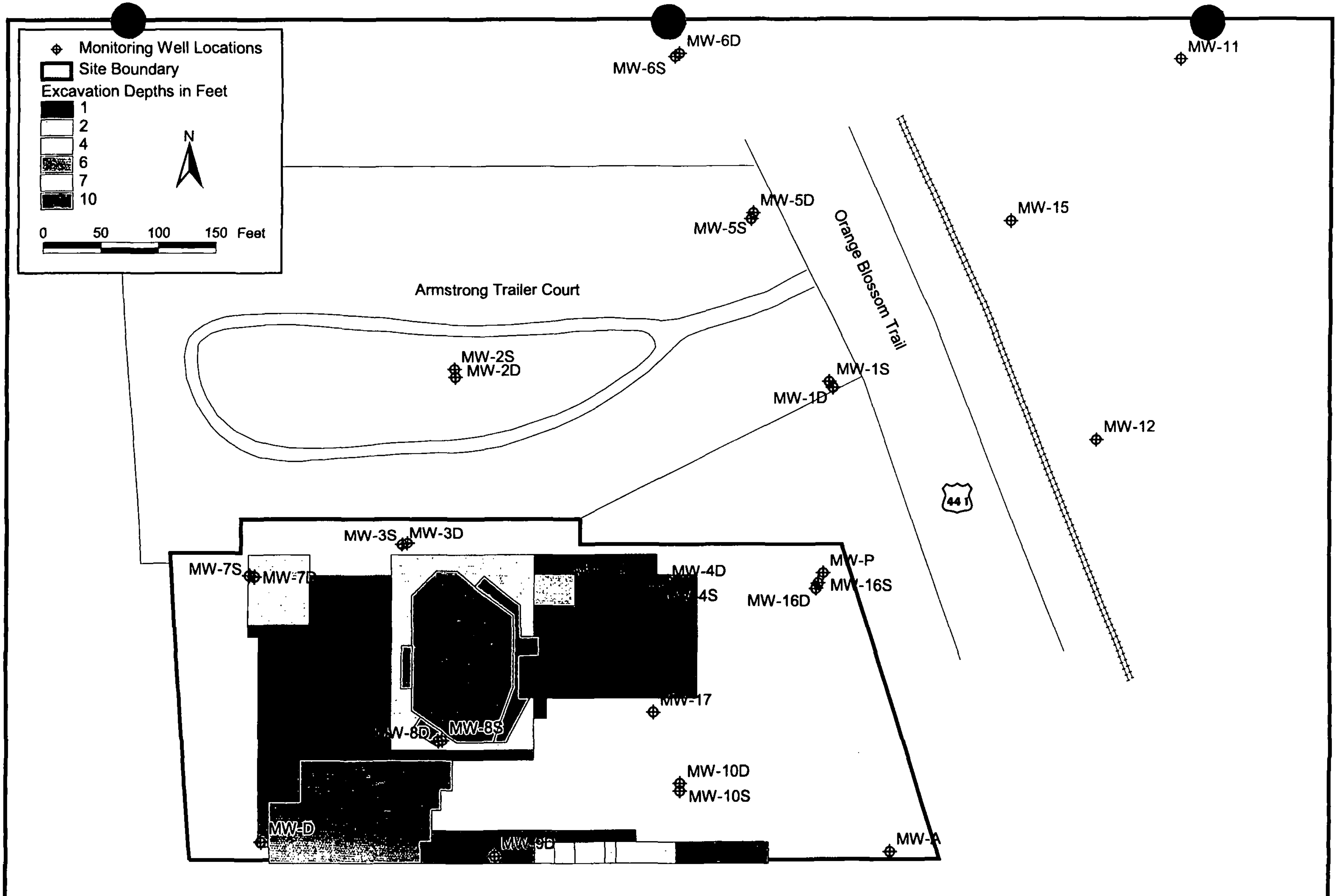
Table 6-2. EPA Score Sheets for Evidence of Natural Attenuation

Well ID	Date	Dissolved Oxygen mg/l	Nitrate mg/l	Fe 2+ mg/l	Sulfate mg/l	Sulfide mg/l	Methane mg/l	Eh mV	pH	Total Organic Carbon mg/l	Temperature °C	Alkalinity mg/l	BTEX mg/l
MW-1S	10/1/91												0.115
MW-1S	4/1/93												0.138
MW-1S	9/1/93												0.190
MW-1S	4/1/94	0.9		0.25		1.72		14	5.3				
MW-1S	4/1/95												0.492
MW-1S	10/1/95												0.335
MW-1S	2/1/96												0.981
MW-1S	5/1/96												1.103
MW-1S	9/1/96												0.042
MW-1S	12/1/96	0.3	<1	0.75	110			-28.4	5.2	43	25	26	0.368
MW-1S	3/1/97	0.79	<1	0.77	86		0.0042	2.1	5.5	46	24.1	20	0.535
MW-1S	10/1/97	0.6	<0.01	1.08	162	<0.2		72.8	5.3	57	26.8	28	0.572
MW-1S	3/1/98	1.02		1.18				130.3	5.5		22.5		0.194
MW-1S	3/19/98		<0.02		21.2	<1				8.9		14	
MW-1S	10/1/98	1.14		1.73				52.2	5		26.5		0.188
MW-1S	10/14/98		0.14		109	<1				28.5		22	
MW-1S	3/1/99	0.94	<0.1	2.13	180	3		187	5.2	46	25	25	0.097
Average		0.81	0.38	1.1	111	1.4	0.004	61	5.3	38	25	23	0.382
Points		0	2	3	0	3	0	0	0	2	1	0	2
Total Points	**13**		**Limited Evidence**										



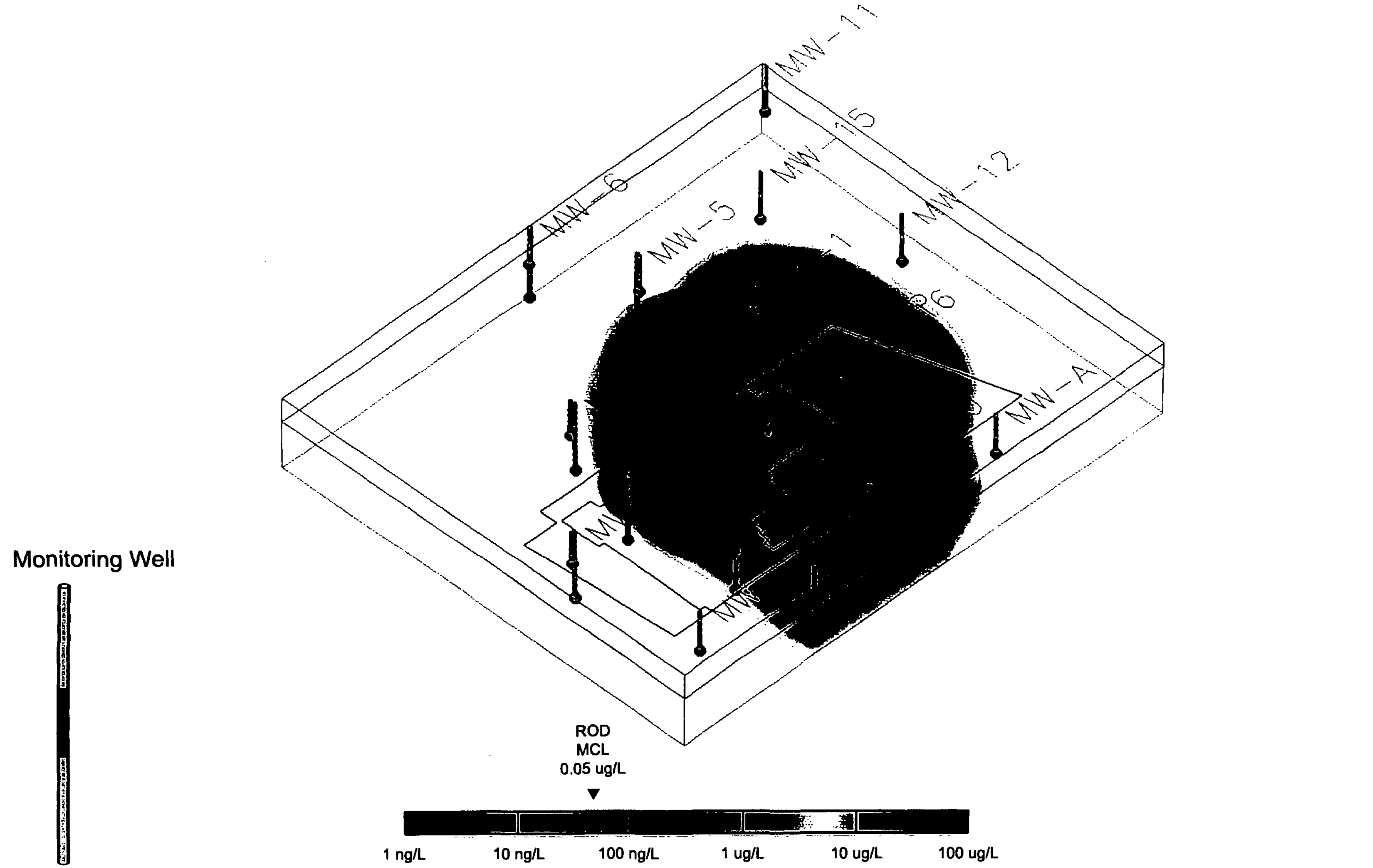
Generation Date: 8/31/99	Figure 1-1. Chevron Orlando, Florida, project location map	Geomega

\\ph\L:\projects\chevron\orlando\orlando.apr: Figure 1-1 a layout



Generation Date: 9/15/99	Figure 1-2. Basemap of Chevron Orlando, Florida, site boundary, excavation surface, and monitoring well locations	Geomega

\\ph\L:\projects\chevron\orlando\orlando.apr: Figure 1-2 a layout



Generation Date: 9/16/99	Figure 4-1. Residual alpha-BHC groundwater concentrations at the Chevron Orlando, Florida site.	Geomega

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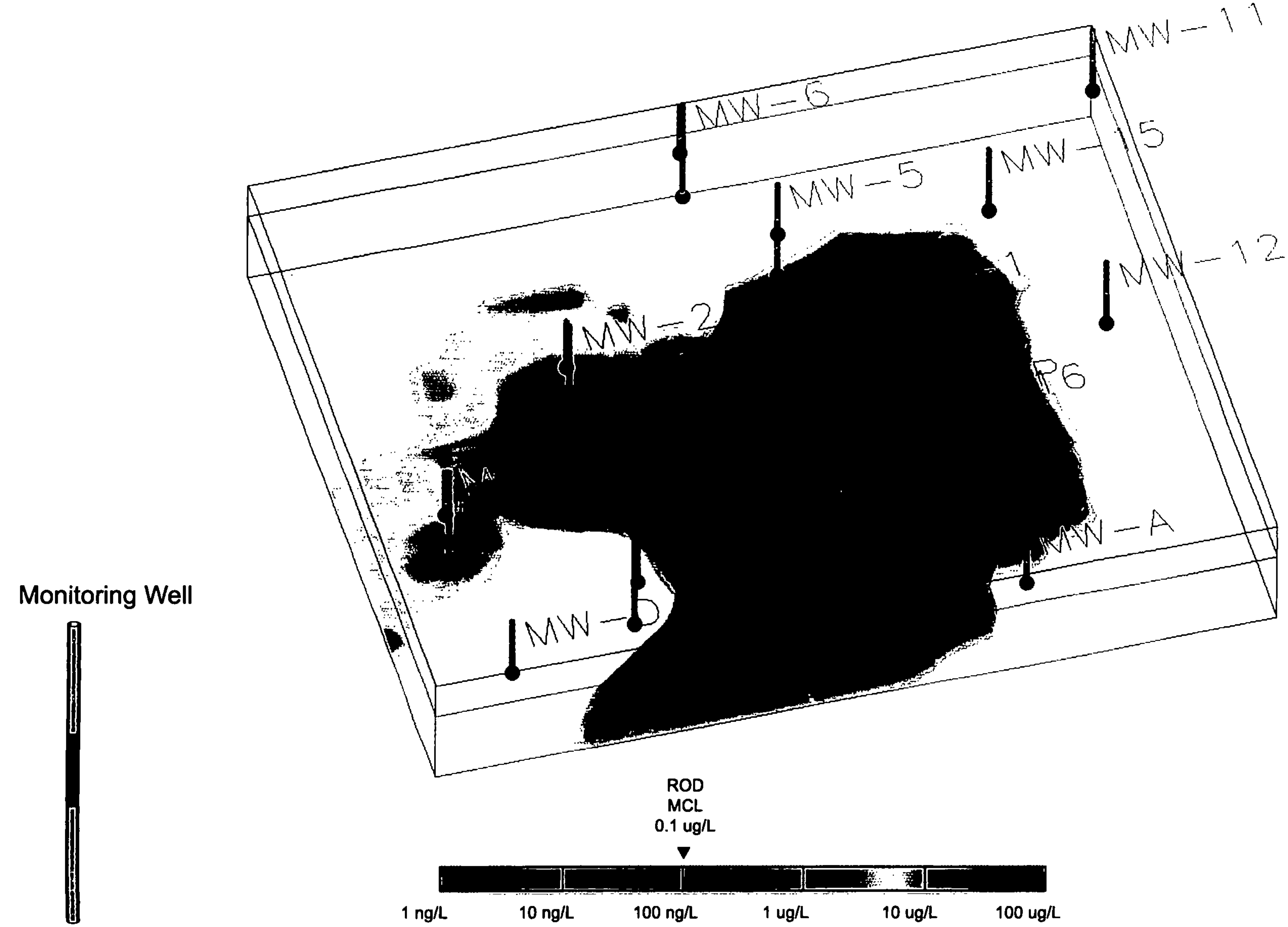

Generation Date: 9/16/99	Figure 4-2. Residual beta-BHC groundwater concentrations at the Chevron Orlando, Florida site.	Geomega

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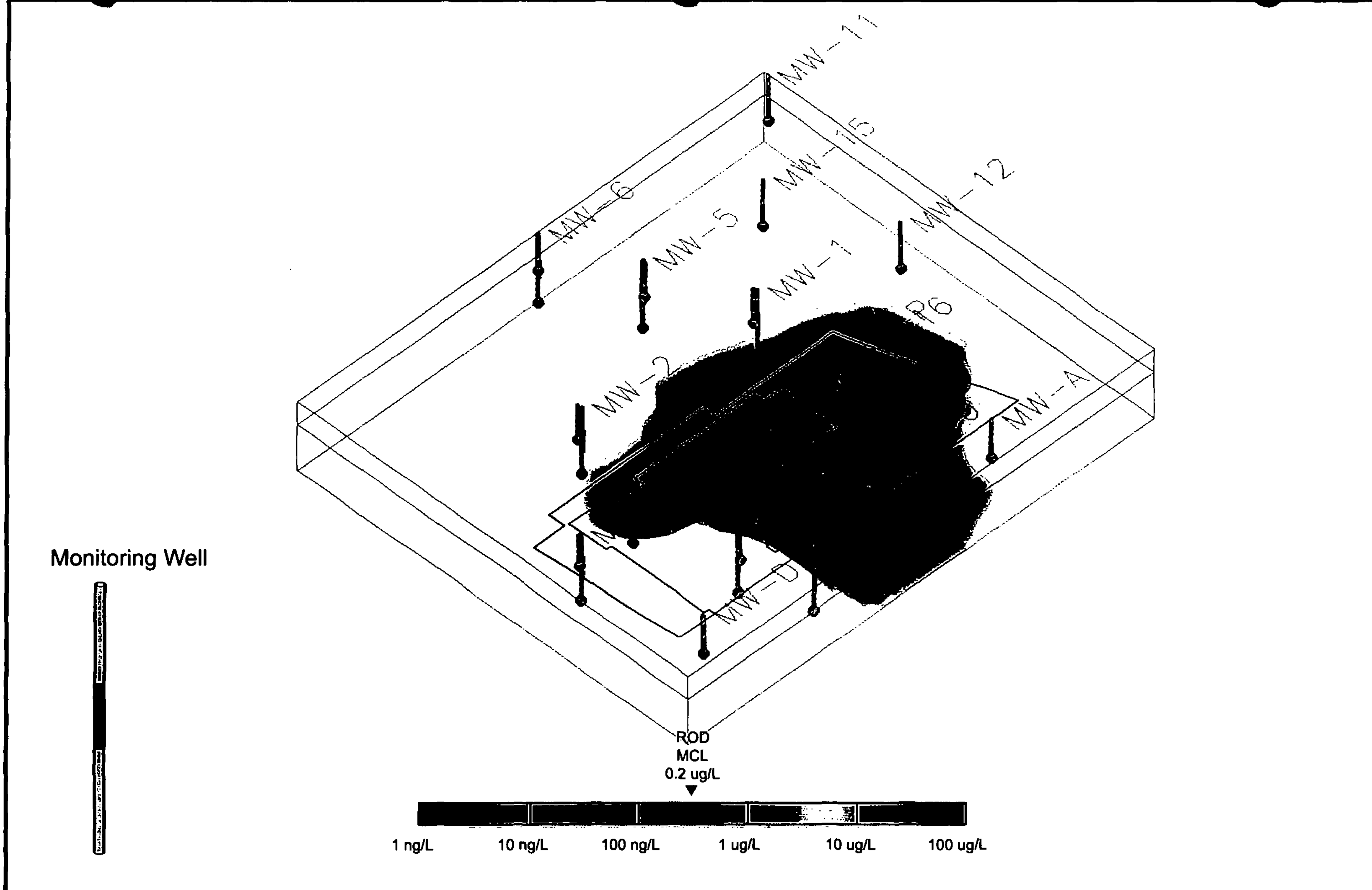

Generation Date: 9/16/99	Figure 4-3. Residual gamma-BHC groundwater concentrations at the Chevron Orlando, Florida site.	Geomega

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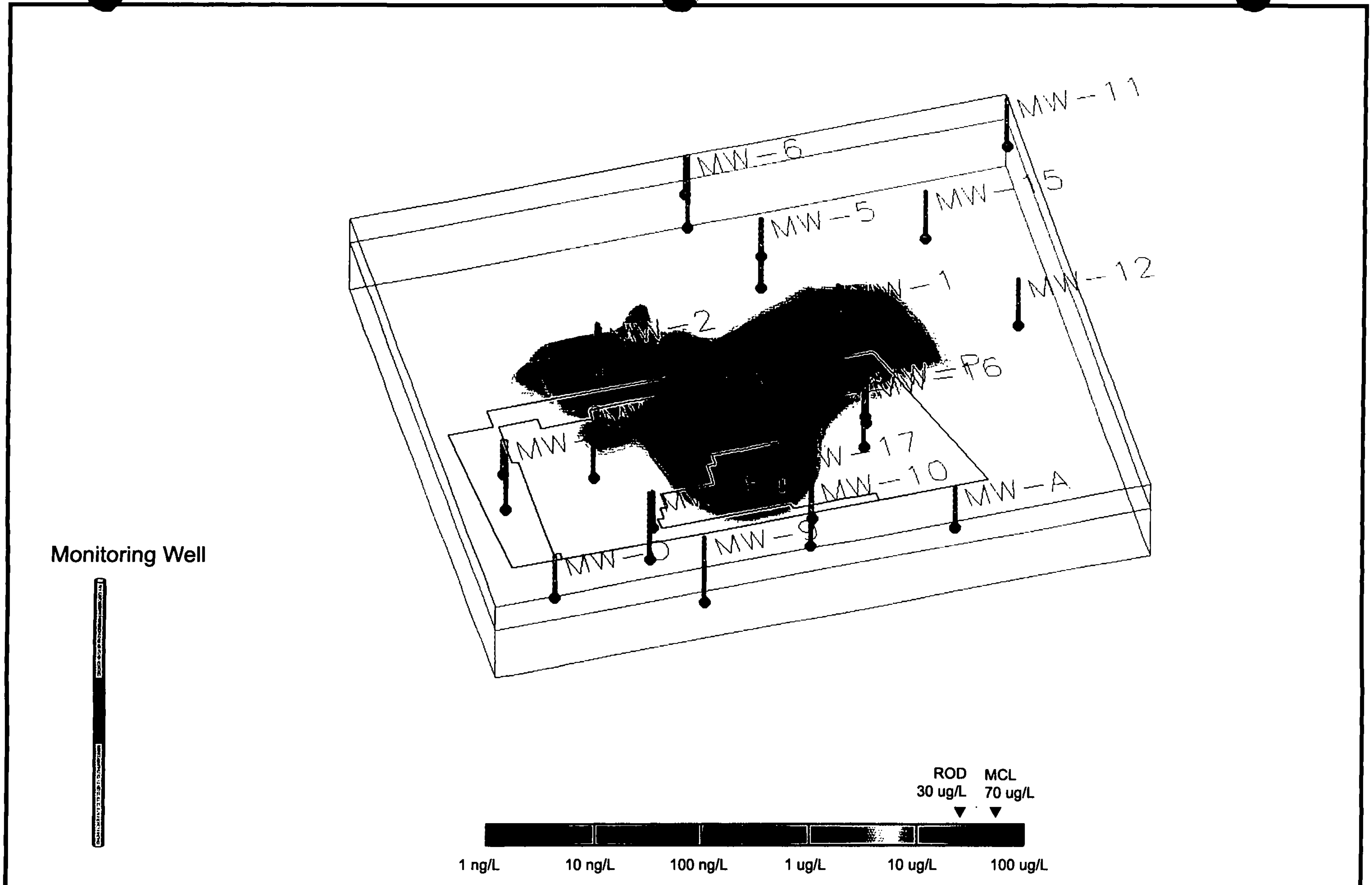

Generation Date: 9/10/99	Figure 4-4. Residual ethylbenzene groundwater concentrations at the Chevron Orlando, Florida site.	Geomega

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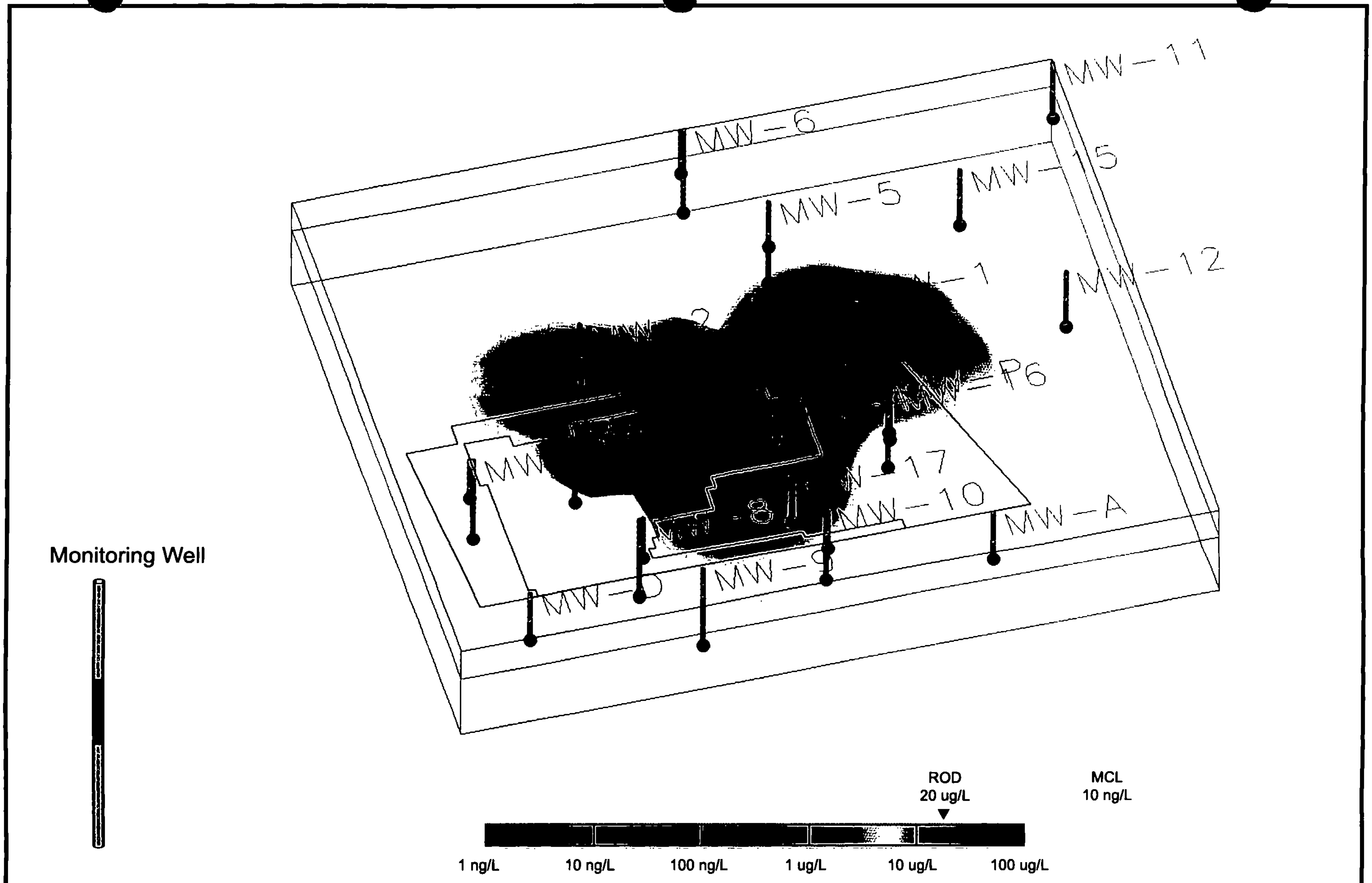

Generation Date: 9/10/99	Figure 4-5. Residual xylene groundwater concentrations at the Chevron Orlando, Florida site.	Geomega

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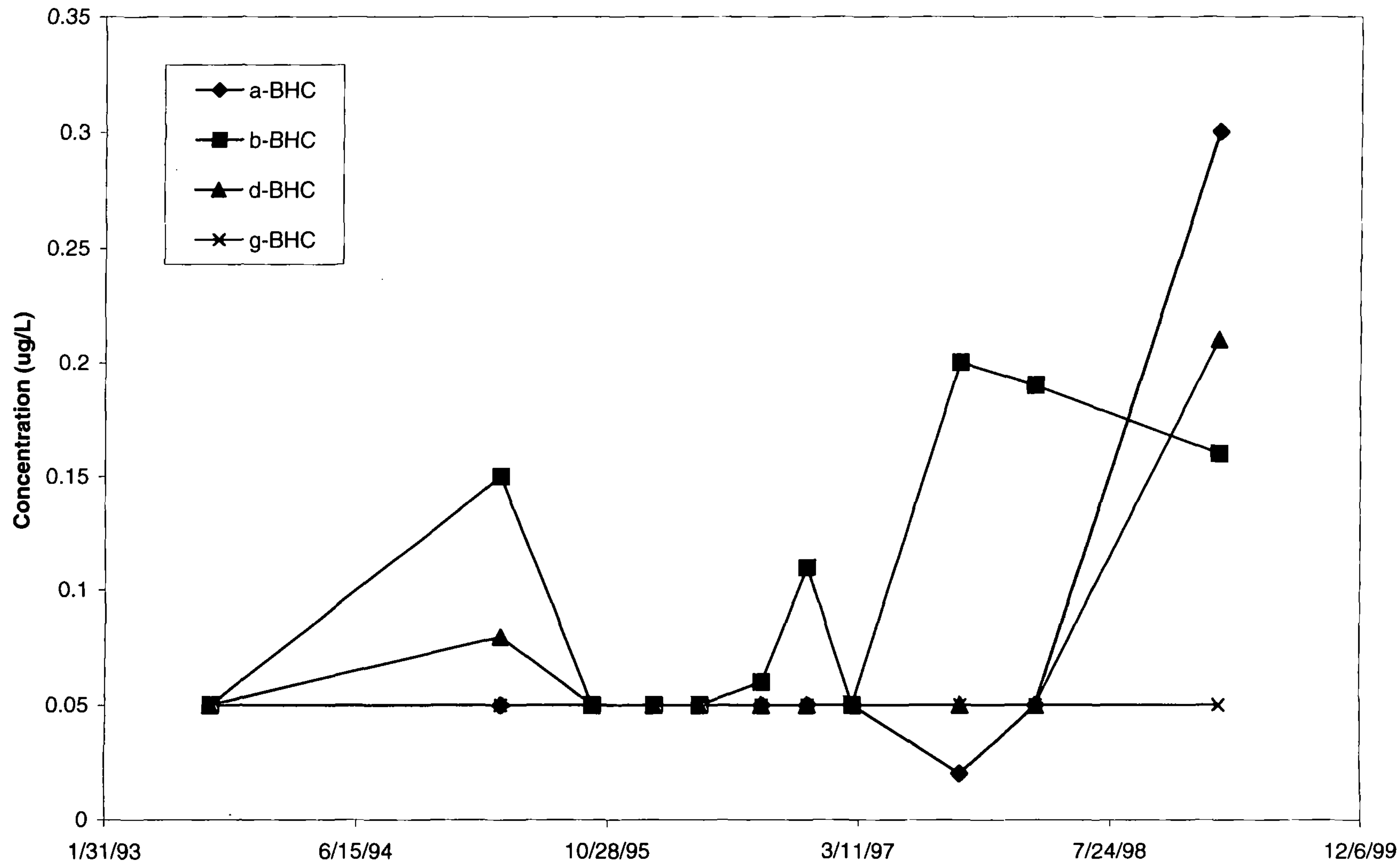

Generation Date: 9/15/99	Figure 4-6. BHC-isomer concentrations in MW-5D at the Chevron Orlando, Florida site.	Geomega

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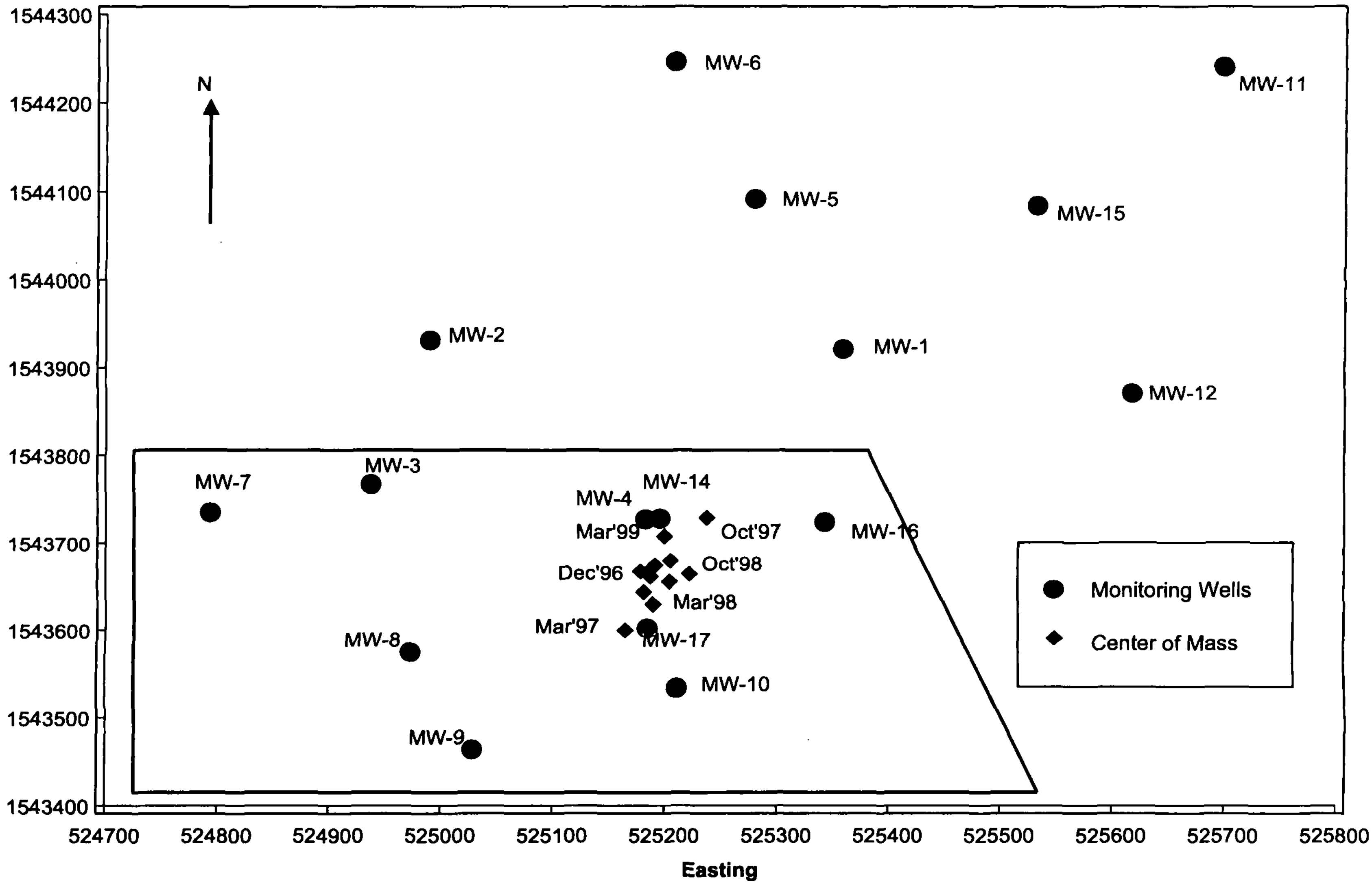
9/16/99



Generation Date: 9/14/99	Figure 4-7. Center of mass of beta-BHC in groundwater at the Chevron Orlando, Florida site.	Geomega

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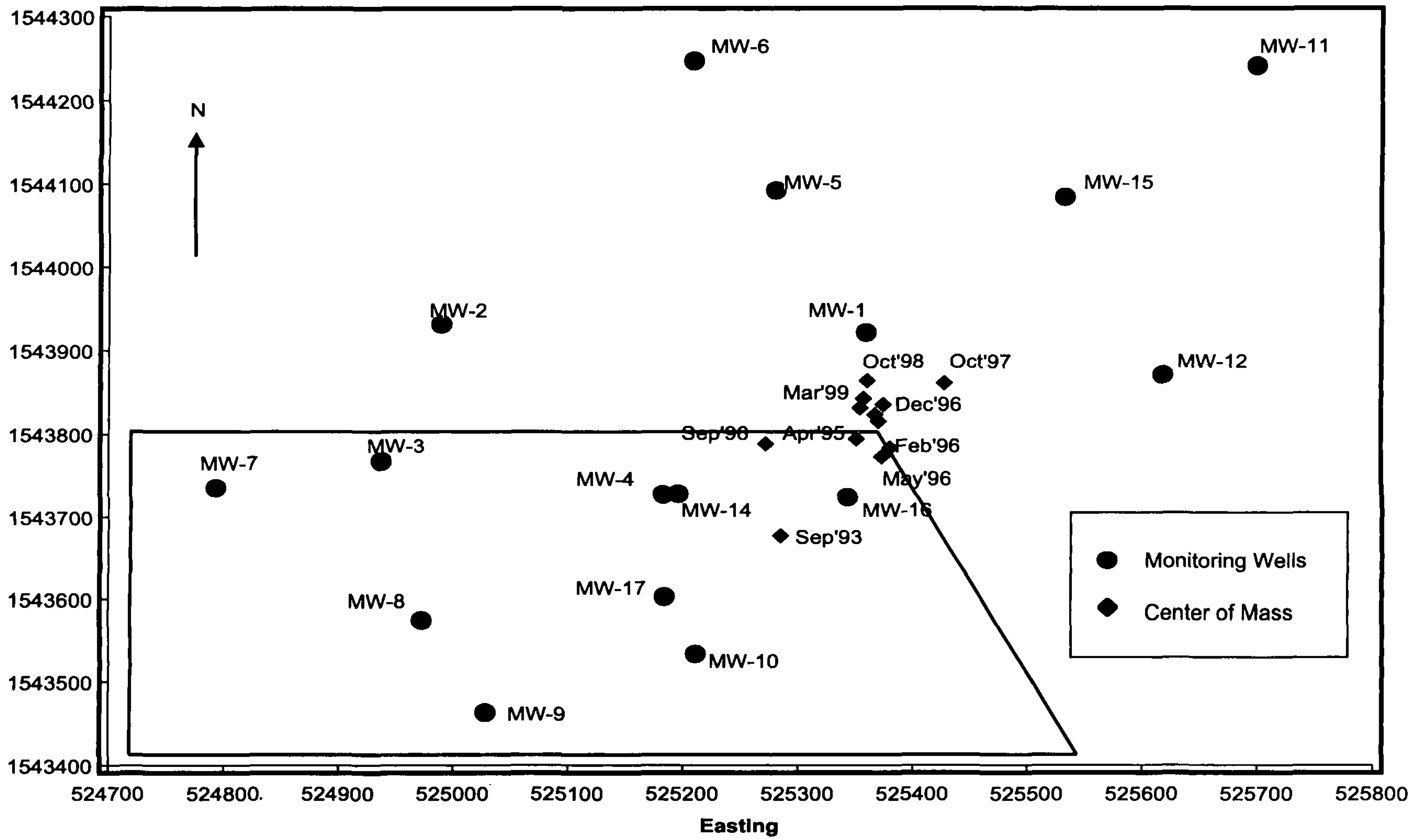

Generation Date: 9/14/99	Figure 4-8. Center of mass of xylene in groundwater at the Chevron Orlando, Florida site.	Geomega

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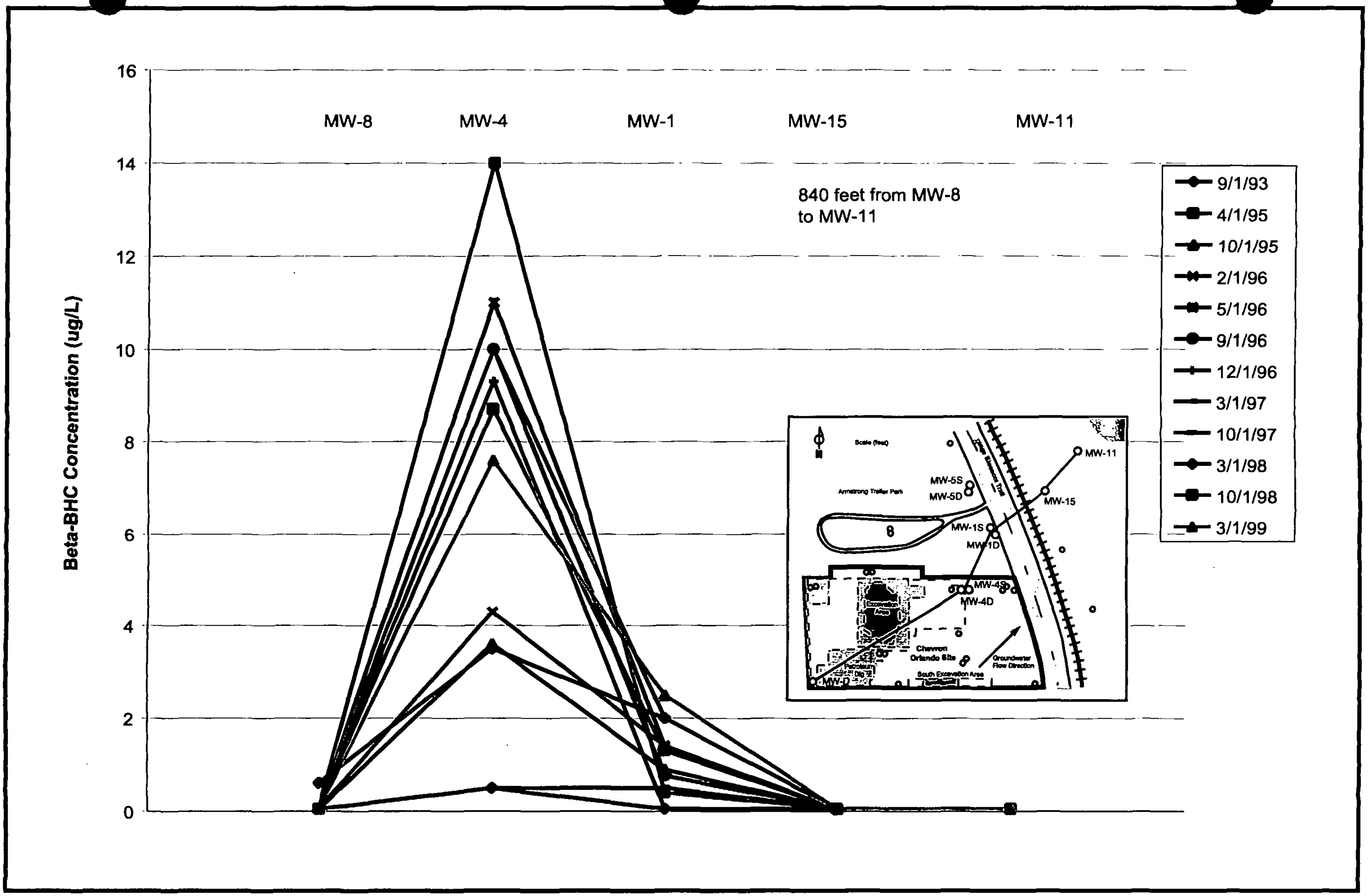

Generation Date: 9/14/99	Figure 4-9. Beta-BHC cross-sectional groundwater concentrations at the Chevron Orlando, Florida site.	Geomega

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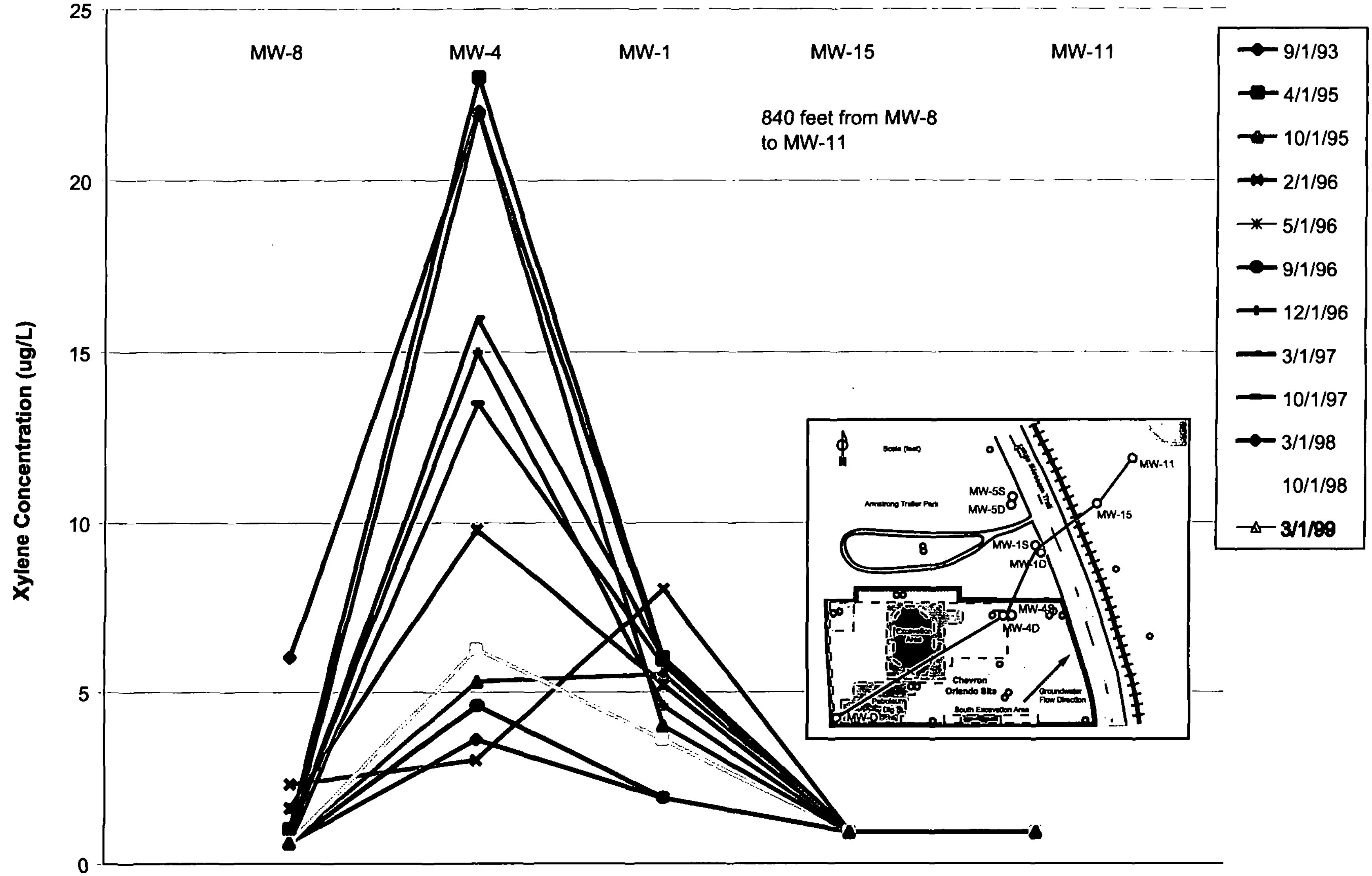

Generation Date: 9/14/99	Figure 4-10. Xylene cross-sectional groundwater concentration at the Chevron Orlando, Florida site.	Geomega

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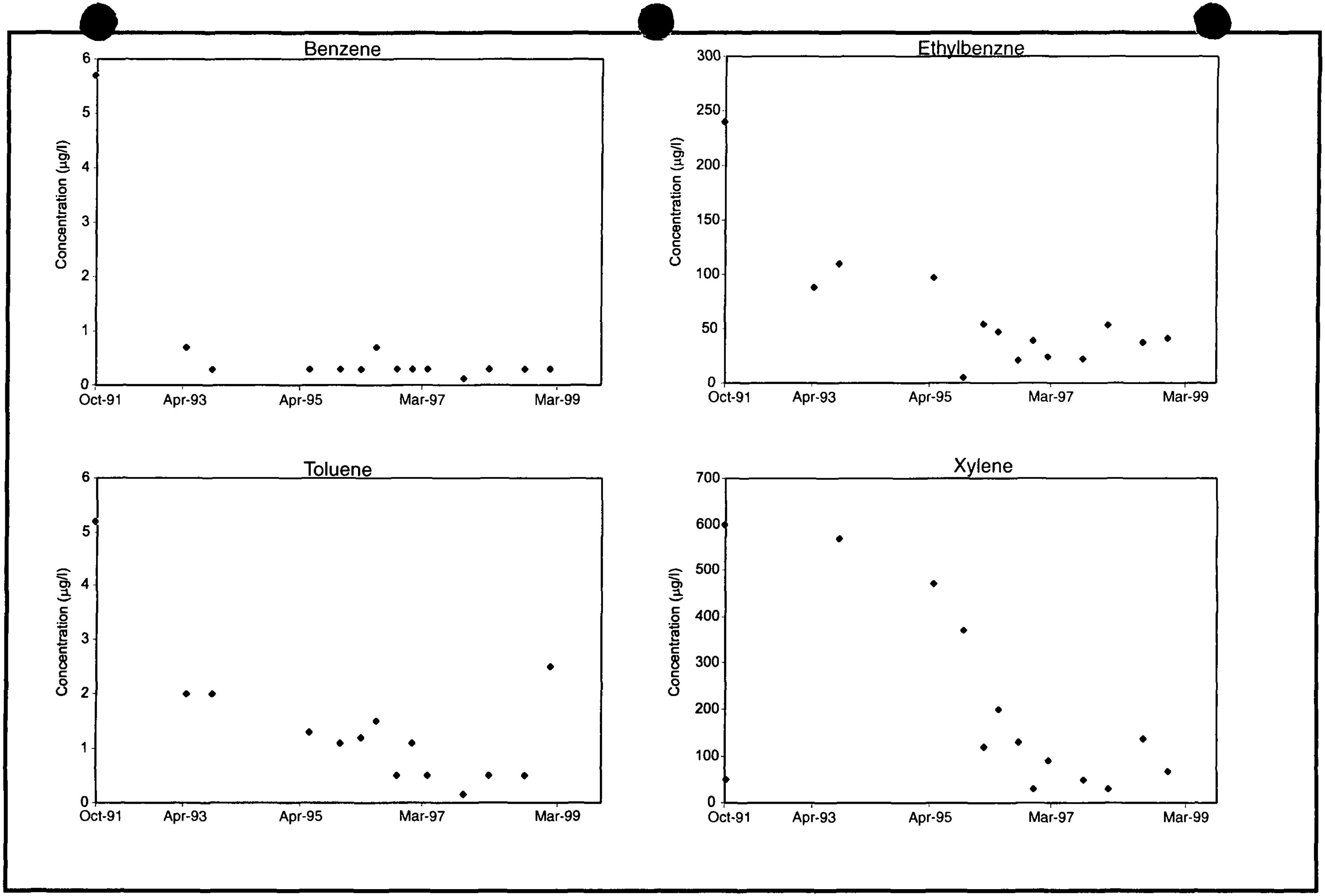

Generation Date: 9\14/99	Figure 4-11. Benzene, ethylbenzene, toluene and xylene groundwater concentrations for MW-2D at the Chevron Orlando, Florida site.	Geomega

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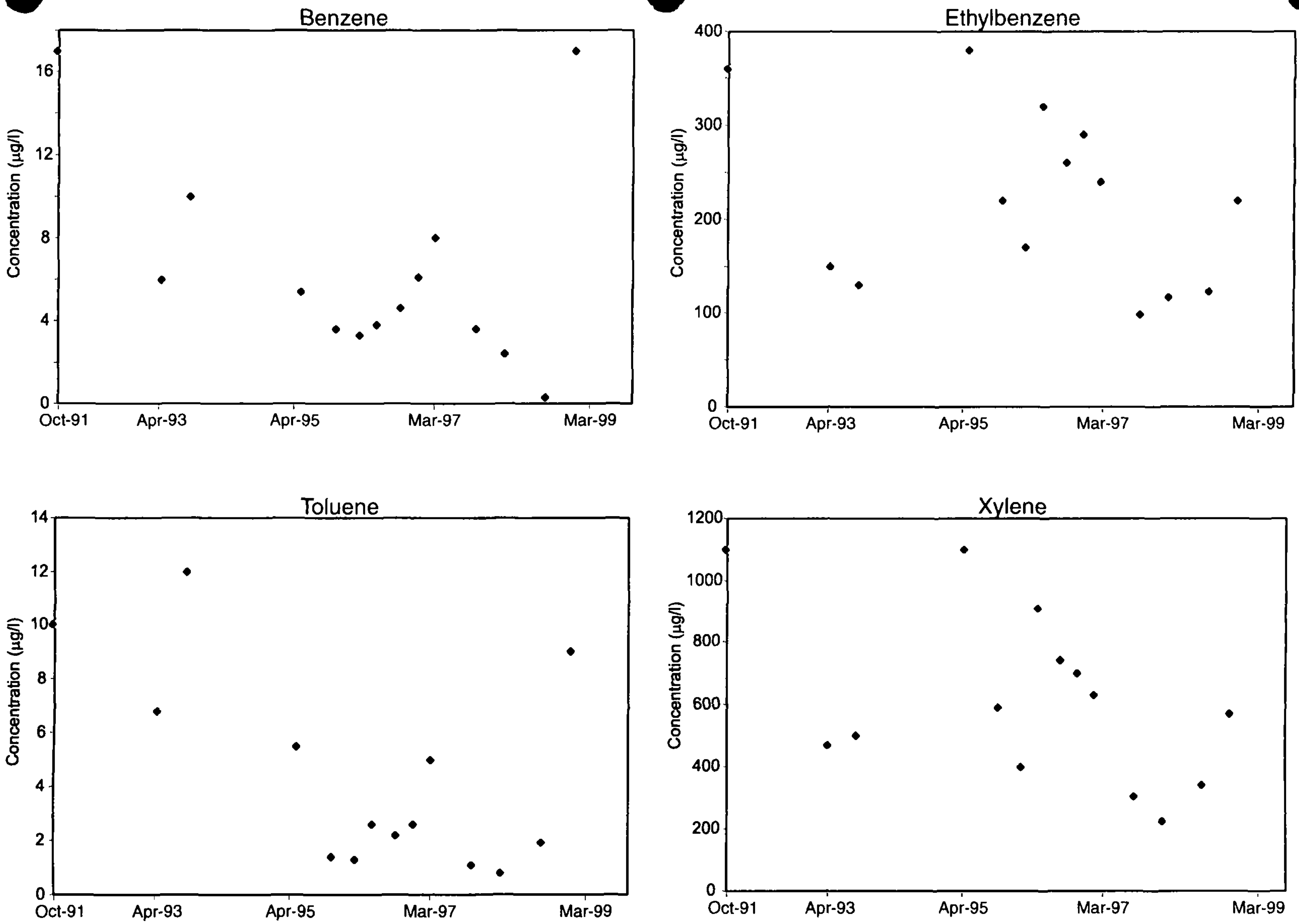

Generation Date: 9\14/99	Figure 4-12. Benzene, ethylbenzene, toluene and xylene groundwater concentrations for MW-4D at the Chevron Orlando, Florida site.	Geomega

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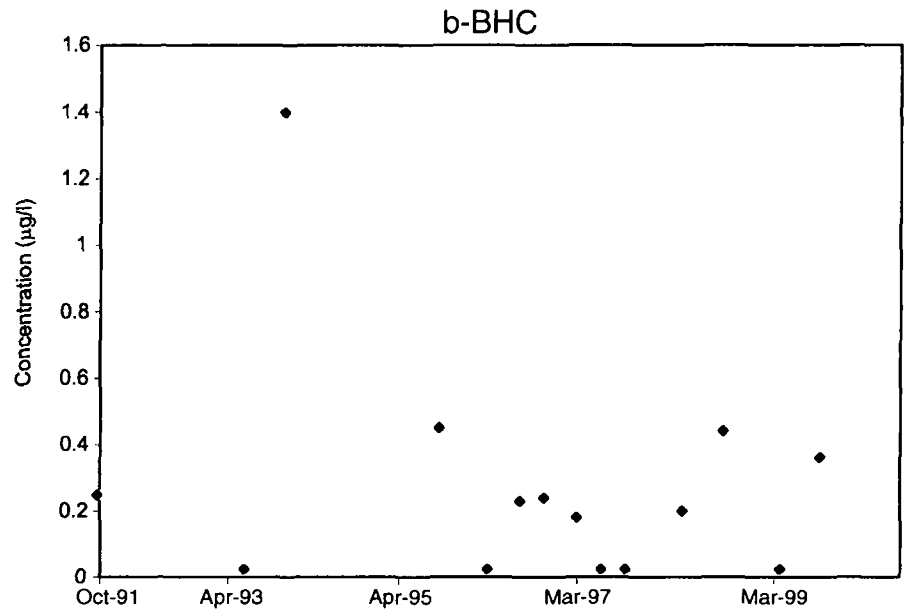

Generation Date: 9\14\99	Figure 4-13. b-BHC groundwater concentrations for MW-2D at the Chevron Orlando, Florida site.	Geomega

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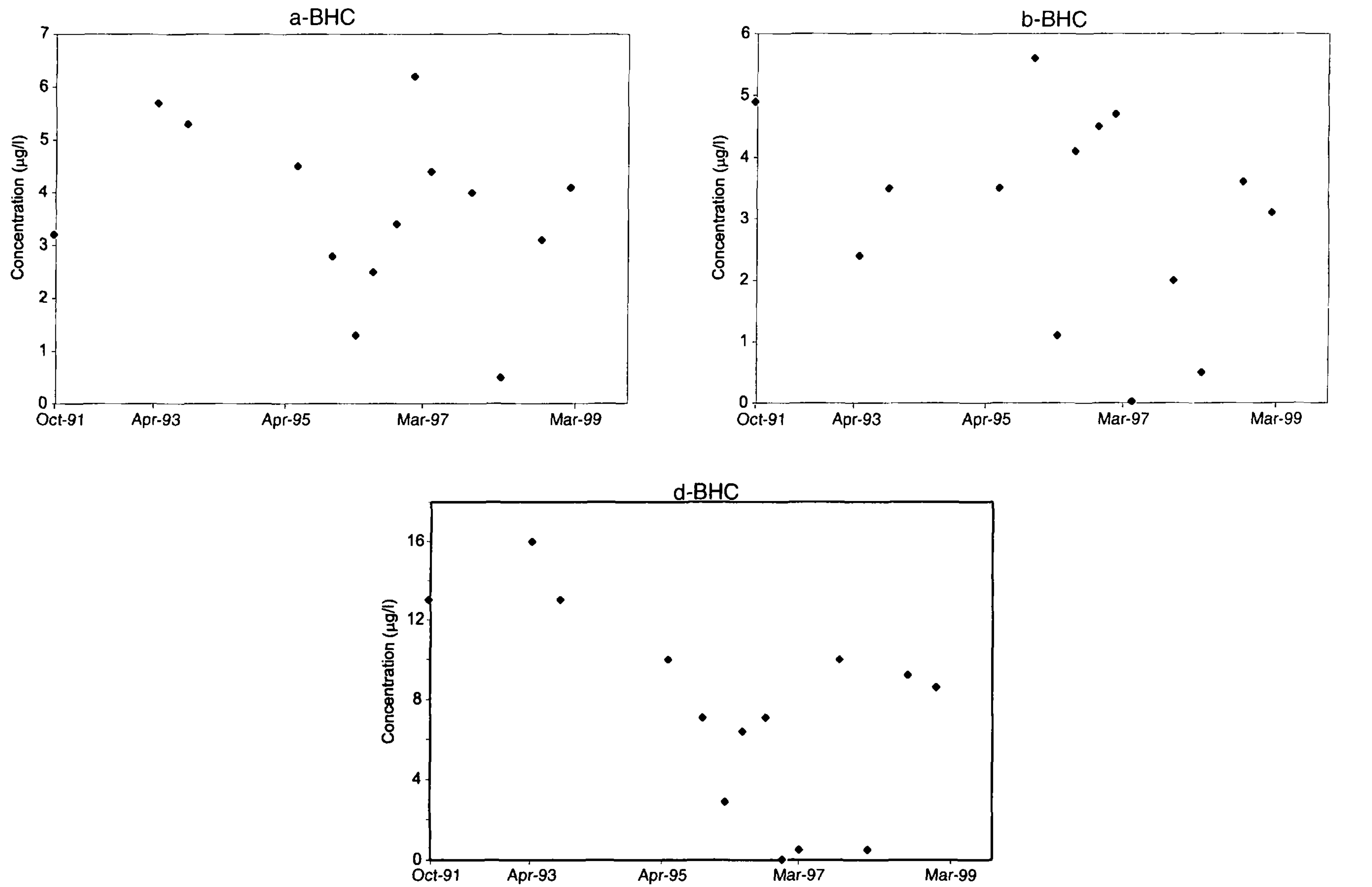

Generation Date: 9/10/99	Figure 4-14. a-BHC, b-BHC and d-BHC groundwater concentrations for MW-4D at the Chevron Orlando, Florida site.	Geomega

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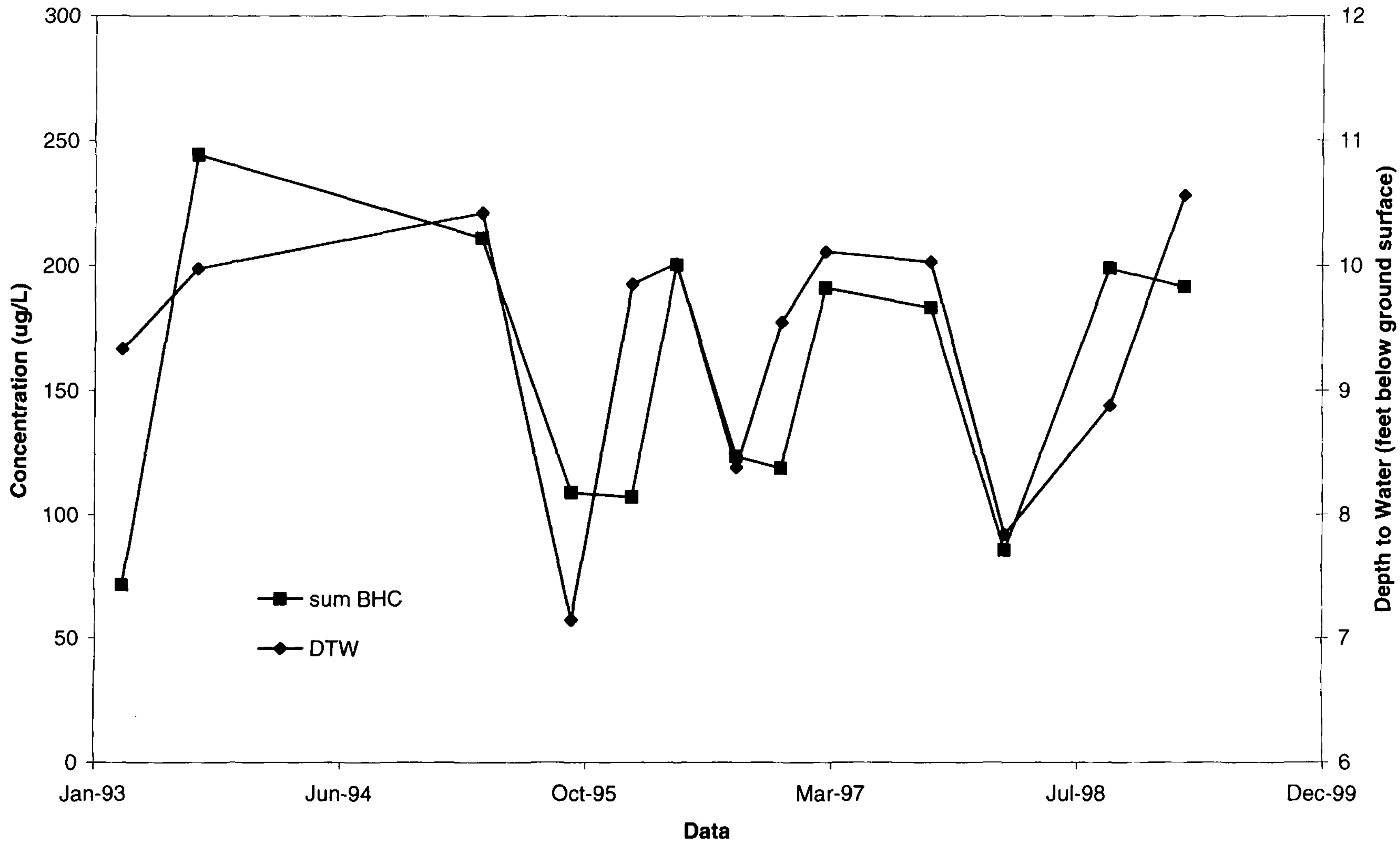

Generation Date: 9/15/99	Figure 4-15. Correlation between total BHC concentration and water level at the Chevron Orlando, Florida site.	Geomega

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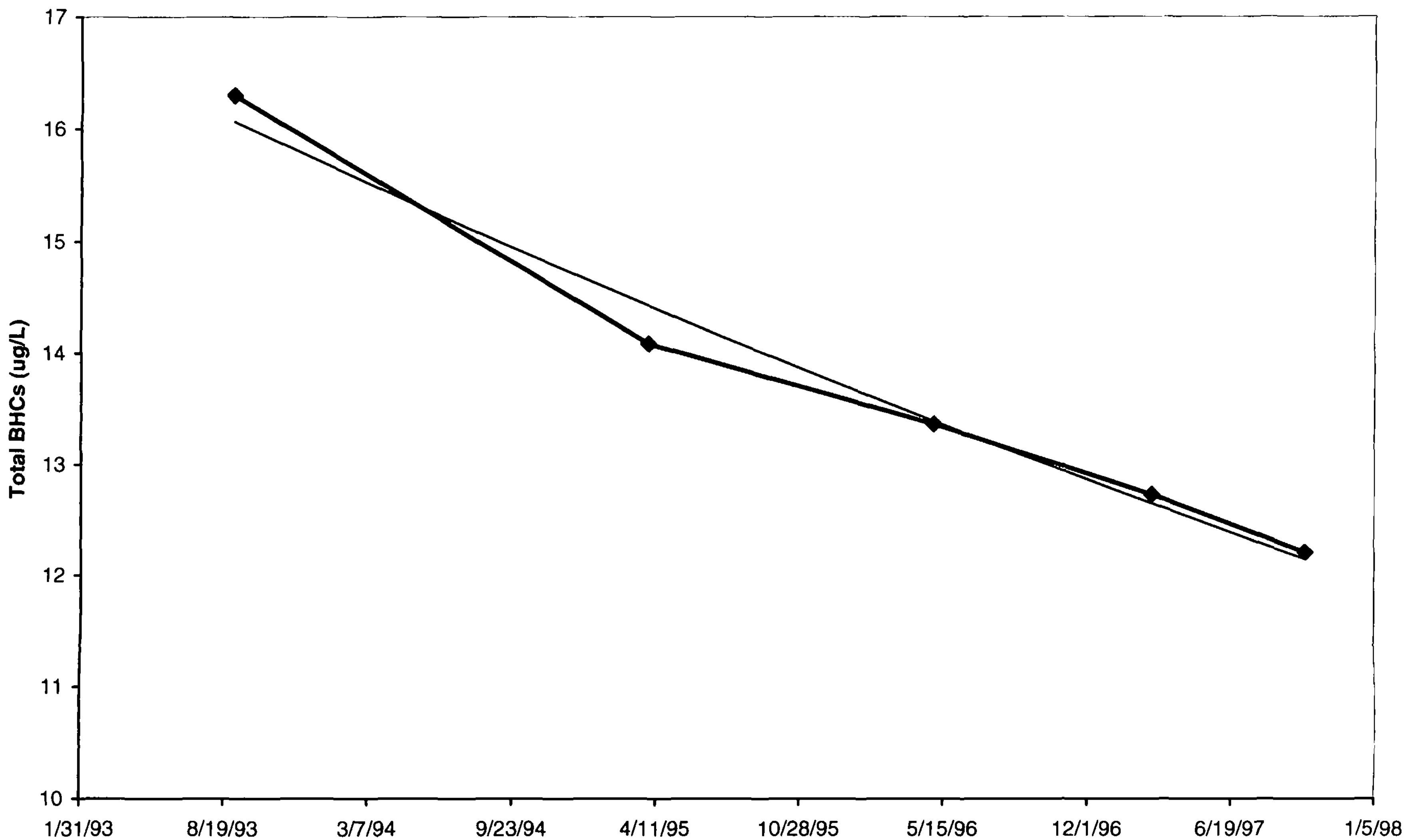
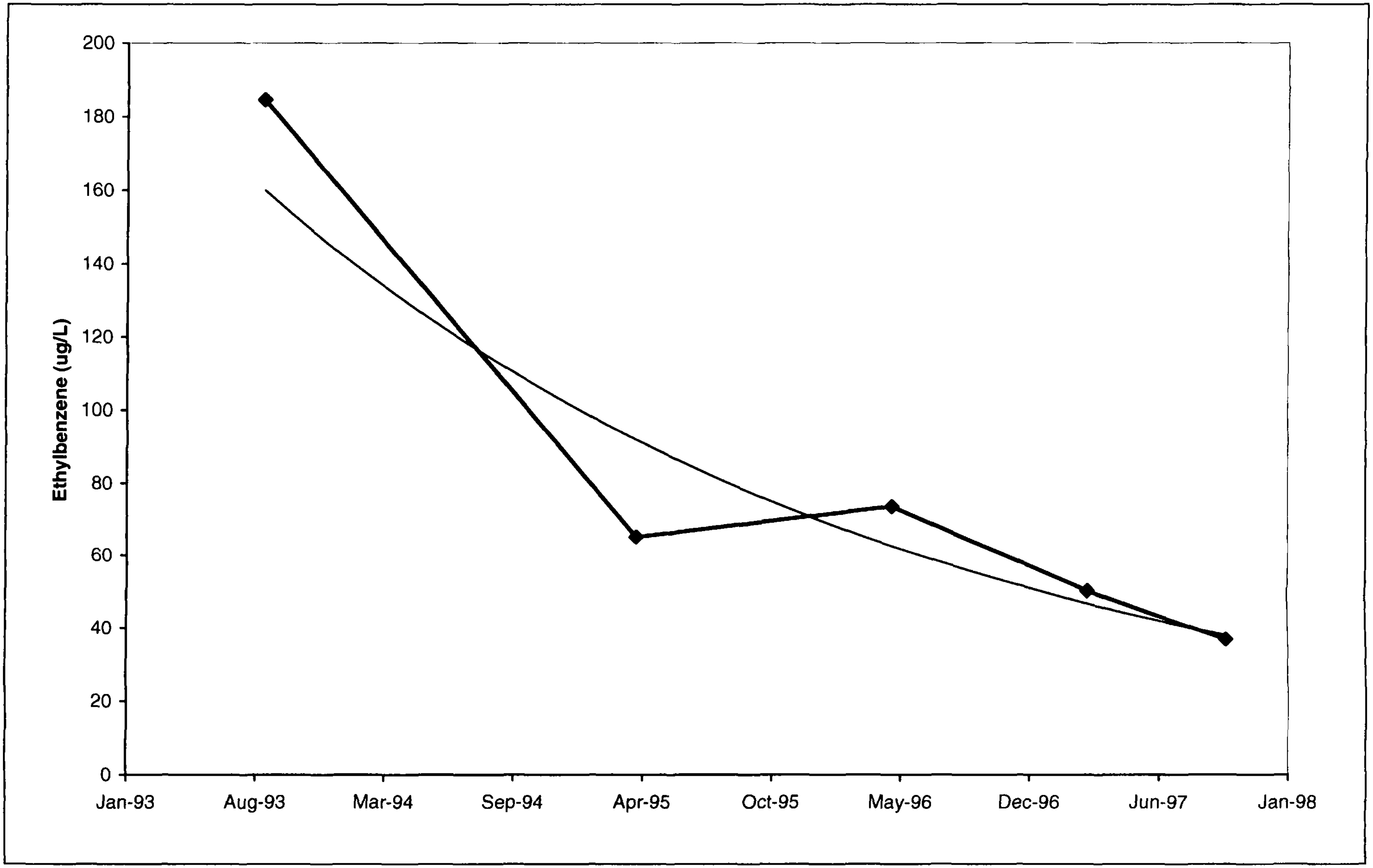
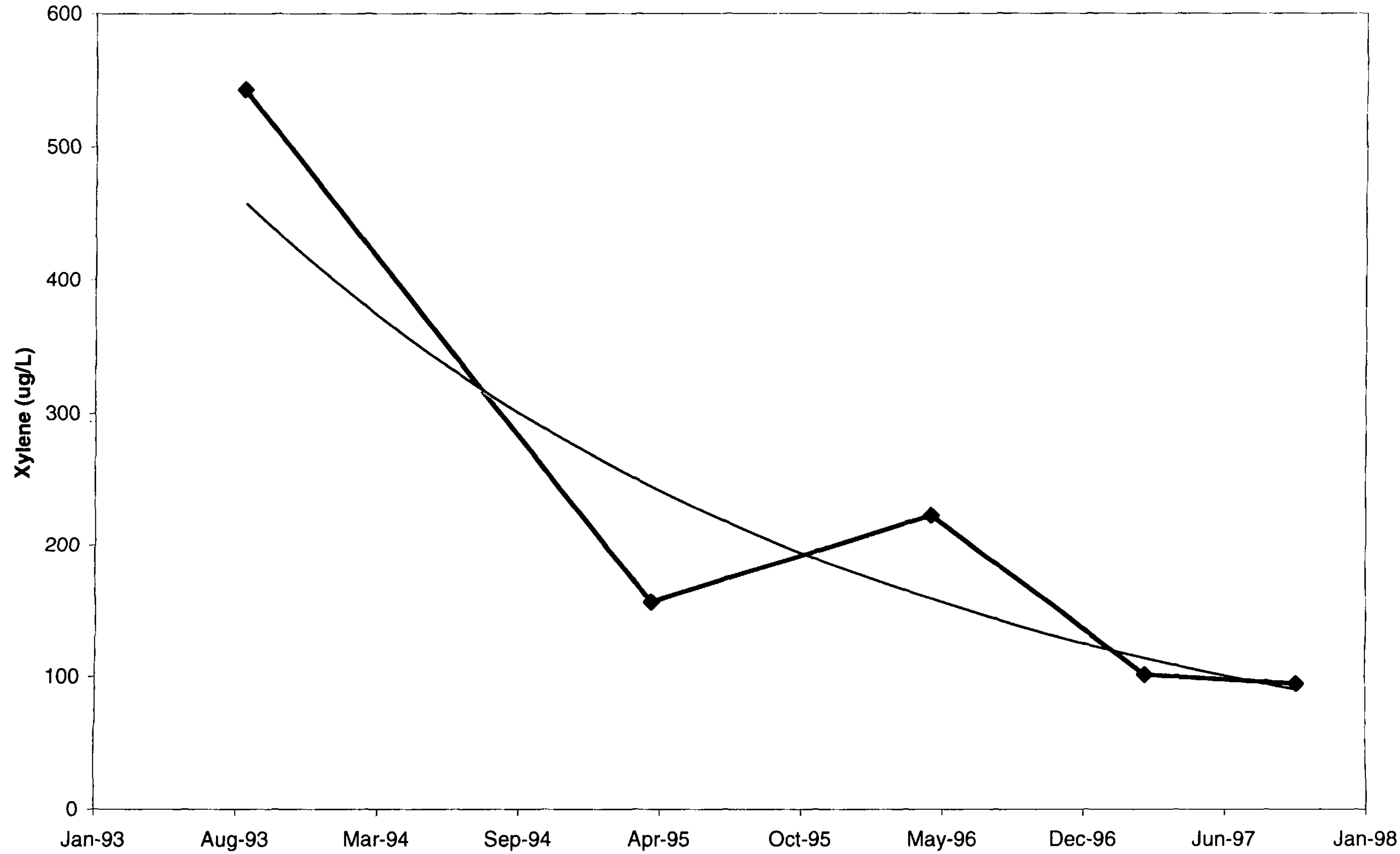


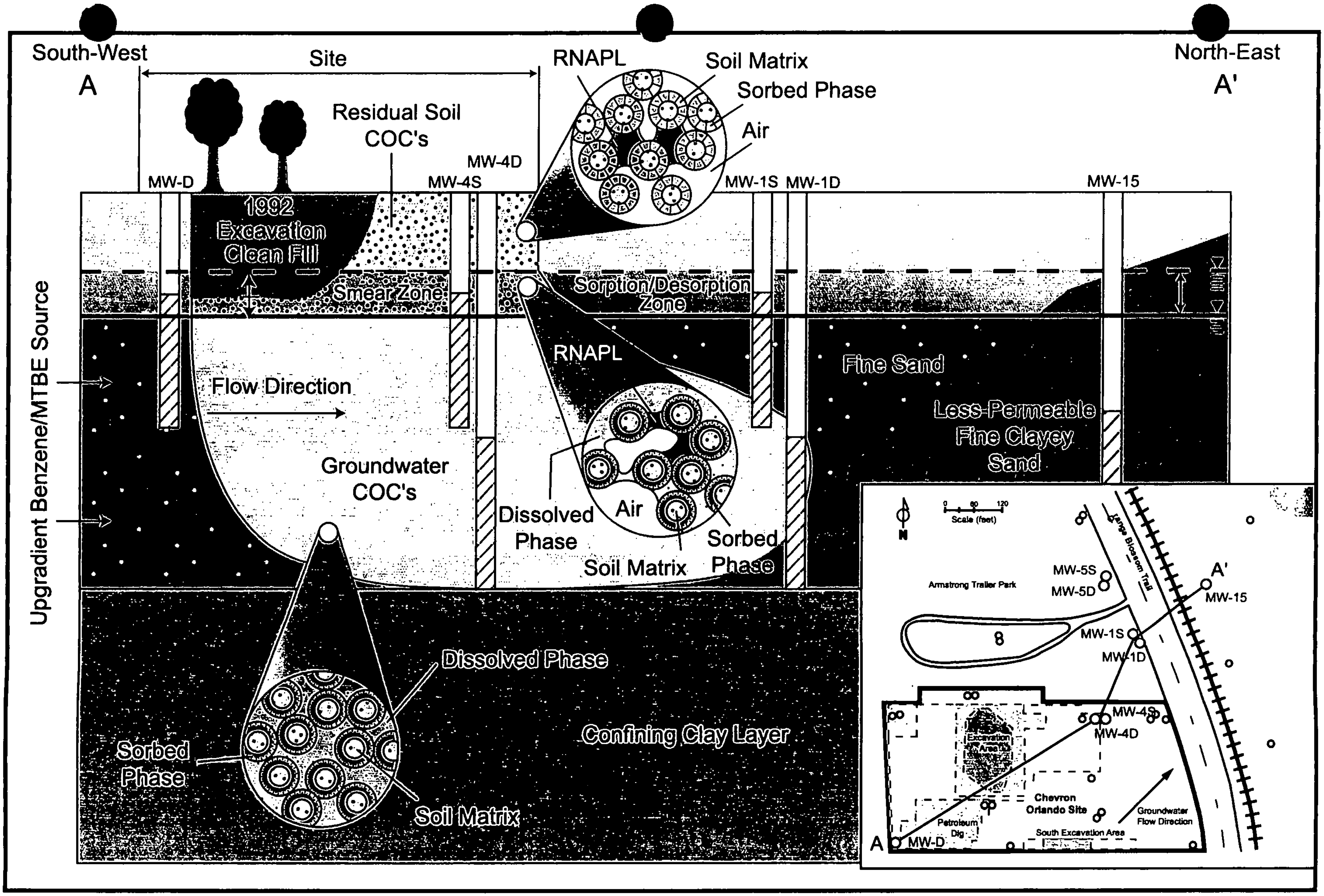
Generation Date: 9/15/99	Figure 4-16. Average total BHC concentrations at consistent water level elevations at the Chevron Orlando, Florida site.	Geomega



Generation Date: 9/15/99	Figure 4-17. Average ethylbenzene concentrations at consistent water level elevations at the Chevron Orlando, Florida site.	Geomega



Generation Date: 9/15/99	Figure 4-18. Average xylene concentrations at consistent water level elevations at the Chevron Orlando, Florida site.	Geomega



Generation Date: 9/15/99	Figure 7-1. Site conceptual model for the Chevron Orlando, Florida site.	Geomega

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Appendix A: Site History and Conditions

1.0 Introduction

The Chevron Orlando site is located at 3100 North Orange Blossom Trail (U.S. Highway 441) in Orlando, Orange County, Florida [Township 22 S, Range 29 E, Section 15] (Figure 1-1). The site is bordered on the east by Orange Blossom Trail (U.S. Highway 441) and the south by active railroad tracks operated by CSX (Figure 1-2). The land use in the areas to the south and west of the site is light industrial, historically including two construction companies with underground storage tanks, two gasoline service stations with underground storage tanks, a door and trim manufacturing company, and a lumber company. Industrial land use to the north and east includes a seed company and the Fairview Commerce Park. Two residential mobile home parks, the Armstrong Trailer Park and 441 Trailer Park, are north of the site (Figure 1-2). The Lake Fairview Commerce Center is across the highway from the eastern portion of the site.

Lake Fairview, a 400-acre remnant karst lake, is located approximately 700 feet northeast of the site. The water level in the lake is maintained at an elevation (87.4 feet amsl) below the ambient groundwater level by a drainage well located on its northwest side.

1.1 Site Ownership and Usage History

The site covers 4.39 acres of cleared land, vegetated with grass with trees along the northeast perimeter. The site is currently unoccupied and fenced to discourage access. Chevron Chemical Company (CCC) constructed the site in 1950 and operated it until 1976 as a pesticide formulation plant. The facility received unblended products in bulk liquid and powder form, and combined the products to formulate pesticides and nutritional sprays for bulk wholesale distribution. The unblended products were delivered primarily by rail, with drum-packaged formulated products removed by truck (TASK/PTI 1994b).

Parathion, chlordane, phaltan, captan, malathion, and paraquat were the primary products formulated at the site. DDT, difolatan, BHC-lindane, dieldrin, aldrin, dibromamine, and aqueous solutions of copper, zinc, manganese, sulfur, and boron (nutritional sprays) were also produced. Chemical carriers and solvents used in pesticide formulation included xylene, kerosene, mineral oil, mineral spirits, ethylbenzene, and aromatic naptha (TASK/PTI 1994b).

The rinsate ponds were used for the collection and disposal of stormwater, pesticide formulating rinse water, drum rinse water, and floor wash-down water. Two site buildings, an office building and a warehouse, were constructed on top of concrete pads. Chevron discontinued the formulation of pesticides in 1976, removed all of the chemical inventory from the site during closure, and drained all equipment lines (TASK/PTI 1994b). The rinsate ponds were backfilled with soil prior to the sale of the site.

In 1978, Mr. Robert Uttal purchased the property and began to operate Central Florida Mack Trucks, a truck sales and service company. Mr. Uttal removed the remaining pesticide formulation equipment and all but one of the above-ground storage tanks. The interior of the warehouse was then washed with soap and water to remove any remaining pesticides. The floor was also rinsed with mineral spirits that were reportedly discharged into the area of the rinsate ponds. After cleaning the warehouse, Mr. Uttal constructed four service bays for truck repair and service and reportedly filled the underground storage tank with concrete.

Central Florida Mack Trucks repaired and serviced diesel engine trucks. Body work and painting were also conducted at the site. The facility generated waste oil and waste degreasing solvent (from the engine and parts cleaning operation). A waste oil trough was located along the railroad spur on the southwestern side of the site. Used oil filters, waste oil, diesel fuel, paint, and partially filled drums of powdered pesticides were discovered in the rinsate pond area during the first Removal Action, along with discarded truck parts and debris. The collocation of these materials demonstrates that they were generated and buried during the period of operation of the Mack Truck facility. Mr. Uttal retained ownership of the site unit 1993.

In March 1984, during the operation of Central Florida Mack Trucks, a tanker truck (owned by Waste Management, Inc.) filled with three percent hydrochloric acid and an unknown amount of nitric acid, was stored onsite for repair. The tanker leaked an estimated 3,000 to 6,000 gallons of acid, which resulted in an explosion in the vicinity of the western rinsate pond. Waste Management excavated the spill area and disposed of the contaminated soils. The excavation was reportedly backfilled with clean fill (BCC 1990). Chevron purchased the property in foreclosure from First Union Bank and the Resolution Trust Company in 1993 and 1994, respectively.

1.2 Site Environmental Investigations and Remedial History

In 1981, Chevron contracted Dames & Moore to conduct an initial soil and groundwater investigation at the site. The investigation (conducted in 1981 and 1982) identified the presence of chlordane and lindane in soil samples, and concentrations of arsenic and lindane in groundwater samples above primary drinking water standards. In January 1987, Jammal & Associates was retained by Southeastern Investment Properties, Inc., to conduct a property transfer assessment of the site. This field investigation identified the presence of several types of organic compounds including benzene, xylene, trichloroethane, 1,1-dichloroethane, 1,2-dichloroethane, methylene chloride, and chlorobenzene in groundwater.

In May 1989, NUS Corporation, under contract with the EPA, conducted a field investigation under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). NUS collected samples from the surface and subsurface soils and the groundwater at the site. The sampling results indicated the presence of pesticides, benzene, toluene, xylene, naphthalene compounds, and metals in soil samples collected along the rail spur adjacent to the former outfall from the floor drain. Chlordane was detected in soil samples collected in the southwest corner of the site. Pesticides, metals, benzene, toluene, xylene, and naphthalene compounds were detected in soil samples collected in the vicinity of the former rinsate ponds. Analysis of the groundwater samples identified metals, benzene, toluene, and xylene in the samples collected near the floor drain outfall. Metals, pesticides, xylene, benzene, trichloroethylene, and chlorobenzene were detected in the groundwater samples collected in the vicinity of the rinsate ponds.

The results of the assessment activities were used to define general areas of soil contamination, and to identify the presence of groundwater contamination. The primary contaminants of interest identified through the assessment chlordane, DDT (and its daughter products), parathion, and variety of petroleum hydrocarbons.

On March 1, 1991, the pesticide formulating/warehouse building on the site burned down. OHM Corporation cleared the building debris from the rail spur area and fenced the south side of the site. Prior to initiation of the removal action activities, BCC further investigated the potential for offsite migration of contaminants in the groundwater, and characterized the magnitude and extent of soil contamination. A screening investigation of the groundwater was conducted to determine the maximum extent of groundwater contamination to the north and east of the site. A soil gas survey was conducted in the southwestern corner of the site to further define the nature and extent of petroleum product contamination in this area. The results of the soil gas survey, combined with the grid sample analytical results, were used to define an area of soil with petroleum product contamination where pesticide contamination was absent.

Following completion of the additional data collection activities, the site structures were demolished and removed. In February 1992, soil excavation began. During the removal action, 17,780 tons of pesticide-contaminated soil were excavated and disposed of, 4,900 tons of petroleum-contaminated soil were excavated and treated, and 126,000 gallons of recovered stormwater and groundwater were treated and discharged into an onsite infiltration trench. All of the excavated areas were backfilled with clean soil, and the site graded and seeded.

On January 25, 1993, CCC voluntarily entered into an AOC with the EPA to conduct the RI/FS for the site. A two-phase field investigation was conducted at the site from April 27, 1993 through April 29, 1994. Phase I activities were conducted to assess the nature and extent of potential groundwater contaminants using the existing monitoring wells. Phase II activities were designed to further assess the magnitude and extent of groundwater contamination, based on a computer model simulation of the contaminant plume, to identify additional locations for monitoring well installation. The surface soil in the Armstrong Trailer Park was also sampled during Phase II to determine if contaminant migration had occurred historically through stormwater runoff from the site.

In March and April 1994, additional removal action activities were performed at the Armstrong Trailer Park. The Phase II results identified elevated concentrations of chlordane in a sample collected from the southwestern corner of the trailer park. CCC conducted additional soil sampling and analysis to delineate areas of soil contaminated with chlordane in concentrations exceeding 4.9 mg/kg. The contaminated soil was subsequently removed and disposed of offsite.

In January 1994, the site was proposed for placement on the National Priorities List (NPL), despite the ongoing remedial investigation. The draft Remedial Investigation Report for the Chevron Chemical Company Site, Orlando, Florida (PTI-Task 1994) was submitted to the EPA on May 31, 1994. Natural attenuation and monitoring was retained because the "long-term effectiveness of all the alternatives is similar" (PTI-Task 1994).

1.2.1 Soil Excavation Details

The on-site chlordane-based soil removal between December 1991 and September 1992 consisted of (BCC 1992):

- removal of 90 to 100 gallons of free-product from subsurface soils,
- removal of 17,780 tons of soil for pesticide remediation,
- removal of 4,900 tons of soil for hydrocarbon remediation, and
- treatment of 126,000 gallons of groundwater extracted during the soil excavation.

The removal action replaced approximately 50% of the site's surface soil and 17% of the subsurface soils above the water table, replacing them with clean fill. The soil excavation activities did not address effects of soil removal on the nature and extent of groundwater COC concentrations.

1.2.2 Trailer Park Soil Removal Details

A removal action amendment was conducted in 1994 to excavate and remove soil containing chlordane at concentrations > 4.9 mg/kg at the Armstrong Trailer Park, located adjacent and to the north of the site (Task 1994). Based on the results of soil sampling, five areas within the Armstrong Trailer Park were excavated. The five excavations were approximately one-foot deep, yielding approximately 227 tons of soil (Task 1994). The excavated areas were backfilled with clean sand.

1.2.3 Monitored Natural Attenuation Program Details

A Remedial Design/Remedial Action program (TASK 1997) was developed to satisfy the ROD monitoring requirements for the adopted monitored natural attenuation (MNA) remedy adopted. The program consists of semi-annual water level measurement and groundwater sample collection and analyses for chemical compounds of interest and indicator parameters for evaluating natural attenuation. The compounds of interest analyses include:

- purgeable aromatic compounds (EPA Method 8010)
- purgeable halocarbon compounds (EPA Method 8020),
- semi-volatile organic compounds (EPA Method 8270),
- chlorinated pesticides (EPA Method 8080),
- organophosphate pesticides (EPA Method 8141), and
- arsenic, chromium, and lead (EPA Method 6010)

on an annual basis (Table 1-1). The remaining semi-annual sampling and analysis event include the aromatics, halocarbons, and chlorinated pesticides.

The suite of indicator parameters included: pH, specific conductivity, temperature, alkalinity, dissolved oxygen, oxidation-reduction potential, nitrate, sulfate-sulfide concentrations, iron(II) concentrations, total organic carbon, biochemical oxygen demand, and chemical oxygen demand (Table 1-1).

2.0 Constituents of Concern

Twelve (12) groundwater Constituents of Concern (COCs) were identified in the Record of Decision (ROD) developed by the EPA in 1996. These constituents included:

- arsenic,
- chromium,
- lead,
- benzene,
- ethylbenzene,
- xylene,
- total napthalenes
- chlordane,
- 4,4'-DDD,
- alpha-BHC,
- beta-BHC, and
- gamma-BHC (lindane)

which have human health-based standards (Table 2-1). The monitored natural attenuation (MNA) groundwater remedy analyzed groundwater for these constituents and others (see Section 1.2.3, Table 1-1). General descriptions of COCs and other compounds, along with their relationship to site activities are outlined below.

2.1 Metals – Arsenic, Chromium, and Lead

Screening analyses of site soils and groundwater indicated the presence of arsenic, chromium, and lead and concentrations high enough to designate these metals as COCs. However, arsenic and lead are seldom found in groundwater at concentrations greater than numerical standards and chromium is not found at concentrations above its numerical standard.

The presence of metals in soils and shallow groundwater is common in large urban settings due to industrial activity, automobile emissions, and historic use of metal-based consumer products (Heaton 1940, Angle et al. 1975, Kabata-Pendias 1992, Small et al. 1995, Mielke 1998). Sources of urban arsenic include arsenical pesticides in wide-spread use during the 1950s and 1960s (McEwan and Stephenson 1979, Davenport 1991) and industrial stack emissions. Chromium was a common element found as a coating for metal parts as well as a coloring agent in paints. Elevated urban lead concentrations are well-documented in cities existing prior to 1970. Lead house paint has been identified as the most significant source of elevated blood lead in children (CDC 1997, MPCA/MDH 1987). Extensive data regarding this lead source was developed pursuant to the Lead-Based Paint Poisoning Prevention Act, which required the Secretary of Housing and Urban Development (HUD) to survey the lead risk in the nations housing stock (EPA 1996). In addition, the use of leaded gasoline rose from the 1920s onward, reaching its peak in the 1970s (Mielke 1991). Lead emitted from automotive sources is incorporated into soil varying amounts depending on traffic density and proximity to the road. The greatest deposition occurs in the urban center of a city, with lower deposition occurring in outlying areas (Mielke 1998).

2.2 Hydrocarbons – BTEX and Napthalenes

The use of hydrocarbons on site took place in the pesticide-formulation period and the truck service period. During pesticide formulation activities, xylenes, ethylbenzene, and napthalenes were used as solvents or carriers for the pesticides. During the truck servicing activities, a variety of solvents, oils, and fuels were in use on site. In addition to the on-site activities, the three nearby commercial gasoline stations have also utilized a variety of solvents, oils, and fuels.

The action levels determined by the ROD are consistent with federal standards for odor as opposed to human health standards for ingestion. Current groundwater concentrations meet the human health standards in all cases but exceed the odor standards at some locations (e.g., MW-4).

2.3 Pesticides – Chlordane, DDD, and BHC-isomers

Domestic usage of pesticides takes place at approximately 1.4 million of 1.9 million farms and 70 million of 95 million households, employing pesticides manufactured by 18 major manufacturers, 2,200 formulators, and 17,000 distributors (EPA 1997a). Usage of conventional pesticides on farms increased from about 400 million pounds in the mid-1960s to a peak of nearly 850 million pounds around 1980, primarily due to adoption of herbicides in crop production (EPA 1997). In the non-agricultural sectors, pesticide usage reached a peak of >300 million pounds in the 1970s and has declined consistently since 1980 to a level of approximately 200 million pounds (EPA 1997a).

The main objectives of pesticide formulation facilities such as the Chevron Orlando facility was to manufacture a product which has optimum biological efficiency was convenient to use (World Bank Group 1997). The active pesticide ingredients were mixed with solvents, adjuvants (boosters), and fillers as necessary to achieve the desired formulations. The formulation steps may have generated air emissions, liquid effluents, and solid wastes.

The principal air pollutants are particulate matter and volatile organic compounds (VOCs). These are released from mixing and coating operations. Most liquid effluents are the result of spills, process cleaning, and process wastewater. The liquid effluents usually bear the pesticides, solvents, and carriers used in the formulation process. The solid wastes are generally composed of discarded packaging, process residues, and off-specification product. Solid wastes may contain up to 40% active pesticide ingredient (World Bank Group 1997).

2.3.1 Chlordane

Until being banned in April 1988, Chlordane was a widely used insecticide employed by homeowners to kill termites by injecting the compound directly into the soil around building foundations. The EPA classified the compound as a "probable cause of cancer in humans" and identified that high concentrations can cause neurological damage. The only remaining legal commercial use of chlordane is for fire ant control

Chlordane was an effective pesticide because it was persistent in and around foundations with a single application proving to be effective up to 30 years (Journal of Commerce 1987).

2.3.2 DDD

DDD is a degradation product of DDT, one of the first widely used organochlorine insecticides that had been used to deter a variety of household and crop pests. Due to the persistence of DDT and its metabolites in the environment and its deleterious effects on wildlife, most notably a severe reduction in the reproductive rate of certain avian species, DDT was banned in the United States in 1972, and eventually in most parts of the world. However, readily detectable concentrations of "total DDT" (DDT plus its metabolites DDE[1] and DDD[2]) can still be found in the soil in vicinity of old manufacturing sites, as well as in lake and river sediments receiving agricultural drainage.

2.3.3 BHC-Isomers (Lindane)

Hexachlorochyclohexane isomers, commonly referred to as BHC-isomers or lindane, are an organochlorine pesticide used on a wide range of soil-dwelling and plant-easting insects. It was commonly used on a wide variety of crops, in water house, in public health to control insect-borne diseases, and as a seed treatment. It is presently in use in lotions, creams, and shampoos for the control of lice and mites in humans (Extoxnet 1996).

The toxicity of lindane was determined through testing on mice, rats, guinea pigs, and dogs. Acute toxicity (severe intoxication) has been observed in human children following ingestion of lotions containing lindane (Extoxnet 1996).

Appendix B: Site Hydrogeology

1.0 Introduction

The Florida peninsula is underlain by a wedge of marine sediments that thickens to the south. The marine sediments are underlain by metamorphic and igneous rocks similar to those of the Appalachian region of the eastern United States. Orange County is underlain by a wedge of marine limestone, dolomite, shale, sand, and anhydrite that is approximately 6,500 feet thick. Overlying the crystalline basement in succession are the Eocene age Lake City limestone (approximately 700 feet thick), the Avon Park limestone (400 to 600 feet thick), and the Ocala limestone (0 to 125 feet thick) which may be highly eroded or missing in some locations (TASK/PTI 1994a). These formations, and permeable portions of the Hawthorn formation, comprise the Floridan aquifer.

The Floridan aquifer is divided into two major water producing zones, the upper zone (between 150 and 600 feet bgs) and the lower zone (between 1,100 and 1,500 feet bgs). The producing zones are composed of dolomitic limestone and are separated by less permeable layers of soft limestones. The lower producing zone is a main source of municipal water supply for much of Orlando and Winter Park. Most recharge to the Floridan aquifer in Orange county occurs through drainage wells located adjacent to surface water bodies (TASK/PTI 1994a).

The Miocene age Hawthorn formation (50 to 300 feet thick) overlies the Ocala limestone. The upper Hawthorn is made of gray-green, clayey, quartz sand and silt, and acts as a confining unit between the surficial aquifer and the Floridan aquifer. The lower part of the Hawthorn formation is comprised of limestone with phosphorite and quartz sand. In areas where the lower part of the formation produce water, it is considered to be part of the Floridan aquifer. However, this water producing unit of the Hawthorn formation may not be present at all locations (TASK/PTI 1994a).

In general, the contact of the Hawthorn formation with the overlying clastic deposits is gradational. The undifferentiated sediments above the Hawthorn formation may include

Caloosahatchee marl; thick deposits of red clayey sand; and marine terrace deposits. The marine terrace deposits consist mostly of loose unsorted quartz sand with varying amounts of organic matter and occasional seams of clay. The undifferentiated sediments are 0 to 200 feet thick. The uppermost unconsolidated sediments consist of Pleistocene to recent age sand deposits which comprise the upper 40 feet of the soil profile. These undifferentiated clastic deposits comprise the surficial aquifer (TASK/PTI 1994a).

2.0 Geologic Description

The shallow lithology underlying the site was defined from monitoring well and soil boring logs. Quartz sand, with varying amounts of silt and organic material was encountered from 0 to 27 feet bgs. The sand is medium to fine-grained, and ranges in color from brown to light tan. Organic material was observed in the upper 10 to 15 feet of the sand unit, along with stringers of clay. The lower portion of the unit grades from sand in an organic matrix to sand in a light tan calcareous mud matrix (TASK/PTI 1994a).

The contact with the Hawthorn formation appears to be an erosional surface with a decreasing percentage of sand and an increasing percentage of calcareous clay. In MW-14, a distinctive clay horizon was encountered at 40-feet below land surface. The gray silty clay layer is approximately 20 feet thick. Olive green clay with phosphorite nodules, characteristic of the upper Hawthorn Formation, was encountered in MW-14 at approximately 65 feet bgs. The fist limestone unit of the Hawthorn formation was encountered at 78 feet bgs. The limestone is light gray with distinctive phosphorite nodules (TASK/PTI 1994a).

3.0 Aquifer Testing

An aquifer performance test was conducted at the site to more accurately determine the characteristics of the surficial aquifer. The data produced by the pumping test were evaluated using various methods to be address the anticipated delayed yield and partial penetration of the aquifer by the pumping well (TASK/PTI 1994a). The pumping test data interpretation provided a range of transmissivity values from 700 to 1,000 ft^2/day. A hydraulic conductivity value of 52 feet/day was selected as most representative of the area-wide surficial aquifer (TASK/PTI 1994a). However, slug tests conducted at the time of monitoring well installations in 1991 observed hydraulic conductivities an order of magnitude slower (1.8 – 6.7 feet/day).

The water level in MW-14 (the Hawthorn formation monitor well) was measured during the pump test to determine whether a connection exists between the surficial aquifer and the Floridan aquifer on site. No change in water level that could be related to the test was measured in MW-14 (TASK/PTI 1994a).

4.0 Precipitation

Daily precipitation data was obtained from the Orlando International Airport (approximately 10 miles from the site). Since 1991, the average annual precipitation for the area is approximately 53 inches per year with a low of 43 inches in 1995 and a high of 68 inches in 1994. Over that time period, monthly rain fall has ranged between 0.2 inches in November 1993 to 13.3 inches in July 1994. The highest precipitation rate generally occurs in the summer months with the lowest precipitation in the winter (Table B-1)

5.0 Phreatic Surface and Vadose Zone

The saturated thickness of the surficial aquifer at the site is 17 to 20 feet above the subjacent clay layer. Groundwater is usually within 10 feet of the ground surface with the actual water table elevation varying in response to recent precipitation events. Water level and daily precipitation data were correlated to demonstrate that statistically significant elevation changes due to precipitation were observed within 7 days and that precipitation-induced transient water level changes had a duration of approximately 60 to 180 days (Table B-2).

Under these conditions, the vadose zone is separated into two portions:

- the upper vadose zone (<7 feet below ground surface) that remains unsaturated at all times,
- the lower vadose zone (7 to 10 feet below ground surface) that is saturated at times and unsaturated at times.

Although the elevation of the water table varies by up to five feet on the site, the hydraulic gradient across the site varies by less than 1.1 feet from an average gradient of 5.4 feet. Thus, a relatively steady rate of specific discharge is maintained regardless of water table elevation. The phreatic surface at the site varies from elevations between 89 and 96 feet amsl (above mean sea level), levels consistently higher than the elevation of Lake Fairview (87.4 feet amsl).

Table B-1. Average Monthly Precipitation for Orlando, Florida

Month	Precipitation (inches)
January	2,35
February	2.53
March	4.34
April	3.34
May	4.11
June	6.74
July	7.80
August	7.72
September	5.30
October	4.03
November	2.22
December	2.53
Average Annual Precipitation	53.01

Table B-2. Water Table Elevation Summary
(elevation in feet above sea level, precipitation in inches)

Date	Average Elevation	Hydraulic Gradient	Same Day Precipitation	Previous 30 Days Precip.	Previous 60 Days Precip.
4/27/93	-	-	0.00	2.24	8.44
9/28/93	91.6	0.0042	0.03	7.38	13.90
4/20/95	91.2	0.0042	0.00	1.02	3.56
10/18/95	93.7	0.0055	0.72	6.40	13.47
2/22/96	91.7	0.0047	0.00	1.71	7.22
5/21/96	91.6	0.0042	0.70	1.23	5.72
9/3/96	92.7	0.0047	1.53	6.59	15.54
12/10/96	91.7	0.0045	0.00	2.58	2.87
3/10/97	90.8	0.0040	0.00	2.25	3.57
10/13/97	90.3	0.0036	0.00	2.24	3.93
3/16/98	93.2	0.0053	0.00	9.76	12.43
10/12/98	92.3	0.0053	0.00	4.00	7.64
3/8/99	90.7	0.0045	0.00	0.003	2.23

Appendix C: Compilation of Groundwater Data

Appendix C presents the compilation of the available analytical results from water samples collected from Chevron Orlando, Florida site monitoring wells. The appendix includes:

- numerical analytical data for constituents of interest (DDD, alpha-BHC, beta-BHC, benzene, chlordane, delta-BHC, ethylbenzene, gamma-BHC, MTBE, toluene, and xylene),
- numerical analytical and field data for geochemical parameters indicative of natural attenuation mechanisms, and
- plots of COC concentration and water level versus time for individual monitoring wells courtesy of Chevron Research and Technology Company (CRTC).

Appendix C
Compilation of Groundwater Data

Well ID	Date	Duplicate	4,4-DDD ug/l	a-BHC ug/l	b-BHC ug/l	Benzene ug/l	Chlordane ug/l	d-BHC ug/l	Ethylbenzene ug/l	g-BHC ug/l	MTBE ug/l	Toluene ug/l	Xylenes ug/l
MW-1S	10/1/91			0.26C	0.40C	5.4		0.97C	53		<1.8	2	55
MW-1S	4/1/93			0.92(2)	0.77(2)	1.1		2.9(2)	35		<5	1.4	100
MW-1S	9/1/93			5(2)	2(2)	5.9		7.7(2)	63		<5	1.5	120
MW-1S	4/1/95			2.5	1.3	6		2.3	120		13	5.6	360
MW-1S	10/1/95			1.9	0.89	5.5		3.5	<4.5		<25	5	320
MW-1S	2/1/96			1.4	1.4	8		4.5	240		6.8	13	720
MW-1S	5/1/96			1.7	1.4	5.2		3.4	290.0		<5	7.4	800.0
MW-1S	9/1/96			1.4	0.76	1.9		3.8	10.0		<5	<1.0	29.0
MW-1S	12/1/96			3.1	<0.05	4.6		<0.05	120		<5	3.8	240
MW-1S	3/1/97			3.9	<0.5	6		<0.5	200		<25	8.5	320
MW-1S	10/1/97			4	2	5.8		10	187		<0.63	4.8	374.2
MW-1S	3/1/98			<0.05	<0.05	1.9		<0.05	60.6		<5	2.1	129.2
MW-1S	10/1/98			1.8	<0.4	3.6		6	54.1		<5	1.26	128.9
MW-1S	3/1/99			2.5	2.5	4		6.5	39		<5	<5	49
MW-1D	10/1/91			<1	<1	<1.2		<1	67			<2	520
MW-1D	4/1/93			2.2(2)	0.93(2)	3.6		2.4(2)	240			5.3	620
MW-1D	9/1/93			2(2)	1.5(2)	3.1		3.3(2)	120(15)			6.3	200(15)
MW-1D	4/1/95			0.77	0.53	1.4		1.6	45			<1	57
MW-1D	10/1/95			1.0	<0.05	2.8 (2)		1.9	14 (2)			1.8 (2)	140 (2)
MW-1D	2/1/96			0.96	0.92	6		1.7	270			6.3	530
MW-1D	5/1/96			0.8	0.88	4.6		1.9	300.0			4.1	610.0
MW-1D	9/1/96			0.59	0.92	2.3		1.5	150			2.1	290
MW-1D	12/1/96			0.92	0.59	2.4		<0.05	170			1.9	230
MW-1D	3/1/97			1.1	<0.05	3		<0.05	200			<5	350
MW-1D	10/1/97			1	1	2.4		3	174			2.1	518.6
MW-1D	3/1/98			<0.05	<0.05	8.9		<0.05	315			8.5	1357
MW-1D	10/1/98			1.2	<0.05	3.17		1.3	180			2.11	501.7
MW-1D	3/1/99			0.93	1.1	<6		1.8	230			<50	540
MW-1D	3/1/99	Duplicate MW-101D		0.81	1.1	3.8		1.6	210			<5	500
MW-2S	10/1/91			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	4/1/93			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	9/1/93			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	4/1/95			<0.05	<0.05			<0.05	1.1				4.6
MW-2S	10/1/95			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	2/1/96			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	5/1/96			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	9/1/96			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	12/1/96			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	3/1/97			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	10/1/97			0.02	0.07			0.04	<0.43				<1
MW-2S	3/1/98			<0.05	<0.05			<0.05	<0.9				<0.9
MW-2S	10/1/98			<0.05	0.05			<0.05	<0.9				<0.9
MW-2S	3/1/99			<0.05	<0.05			<0.05	<1				<2
MW-2D	10/1/91			0.68C	<0.50	5.7		<0.50	240			5.2	600
MW-2D	4/1/93			<0.05	<0.05	0.7		<0.05	88			2	570
MW-2D	9/1/93			0.26	1.4	<0.6		0.21	110			2	470
MW-2D	4/1/95			<0.25	0.45	<0.6		<0.25	97			1.3	370
MW-2D	10/1/95			<0.05	<0.05	0.6		<0.05	5.1			1.1	120
MW-2D	2/1/96			0.11	0.23	<0.6		0.19	54			1.2	200
MW-2D	5/1/96			<0.05	0.24	0.7		0.15	47.0			1.5	130.0
MW-2D	9/1/96			<0.05	0.18	<0.6		0.10	21			<1	30
MW-2D	12/1/96			<0.05	<0.05	<0.6		<0.05	39			1.1	91
MW-2D	3/1/97			<0.05	<0.05	<0.6		<0.05	24			<1	49
MW-2D	10/1/97			0.05	0.2	<0.25		<0.01	22.1			<0.31	29.5
MW-2D	3/1/98			0.18	0.44	<0.6		<0.05	53.1			<1	137
MW-2D	10/1/98			0.14	<0.05	<0.6		0.12	35.6			<1	63.9
MW-2D	10/1/98	Duplicate MW-105				<0.6							
MW-2D	10/1/98	Duplicate MW-109							38.9				
MW-2D	10/1/98	Duplicate MW-110										<1	
MW-2D	10/1/98	Duplicate MW-111											71.2
MW-2D	10/1/98	Duplicate MW-122		0.11									
MW-2D	10/1/98	Duplicate MW-123			<0.05								
MW-2D	10/1/98	Duplicate MW-124						0.078					
MW-2D	3/1/99			0.13	0.36	<0.6		0.18	41			<5	50
MW-3S	10/1/91		1.8C	<0.15	0.61C	<3	5.8C	<0.15	120	<0.15		<5	930

Appendix C
Compilation of Groundwater Data

Well ID	Date	Duplicate	4,4-DDD ug/l	a-BHC ug/l	b-BHC ug/l	Benzene ug/l	Chlordane ug/l	d-BHC ug/l	Ethylbenzene ug/l	g-BHC ug/l	MTBE ug/l	Toluene ug/l	Xylenes ug/l
MW-3S	9/1/93		2.3(2)	0.81(2)	2.2(2)	<0.6	12(2)	0.73(2)	95	<0.05		1.2	190
MW-3S	9/1/93	Duplicate MW-103S	2.7(2)	1.1(2)	4(2)	1.4	13(2)	0.88(2)	130	<0.05		<2	650
MW-3S	4/1/95		2.2	0.58	2.2	<1.2	17	0.89	62	<0.25		<2	150
MW-3S	4/1/95	Duplicate MW-103S	3.3	0.63	2	<0.6	17	1	64	<0.25		<1	150
MW-3S	10/1/95		<0.2	0.24	<0.1	2.3	<2	0.24	31	<0.1		<1	47
MW-3S	2/1/96		0.5	0.43	0.45	<0.6	2.9	0.35	14	<0.05		<1	14
MW-3S	5/1/96		<0.1	0.47	0.94	<0.6	<1.0	0.67	22	<0.05		<1	22
MW-3S	5/1/96	Duplicate DUP-3	<0.1	0.5	0.94	<0.6	<1.0	0.71	23	<0.05		<1	23
MW-3S	9/1/96		<0.1	0.52	<0.05	3.3	<1.0	0.48	36	<0.05		1.3	57
MW-3S	12/1/96		<0.5	<0.25	<0.25	<0.6	<5	<0.25	21	<0.25		<1	22
MW-3S	3/1/97		<0.5	<0.25	<0.25	0.9	<5	<0.25	28	<0.25		<1	34
MW-3S	10/1/97		0.4	0.8	0.9	0.57	<0.75	0.6	11.6	<0.01		<0.31	35.8
MW-3S	10/1/97	Duplicate MW-103	0.9	0.4	0.7	0.56	<0.75	0.6	11.4	<0.01		<0.31	35.2
MW-3S	3/1/98		0.46	0.46	0.89	1.9	<0.75	0.53	9.4	0.09		<1	49.3
MW-3S	10/1/98		<0.04	0.39	0.74	2.65	<0.23	0.26	8.15	<0.04		<1	28.1
MW-3S	3/1/99		2.3	0.35	0.99	1.6	<1	2.2	23	<0.5		<5	59
MW-3D	10/1/91			<0.25	<0.25	<6		<0.05	96				1100
MW-3D	9/1/93			<0.05	<0.05	<0.6		<0.05	0.9				4
MW-3D	4/1/95			<0.05	0.05	<0.6		<0.05	1.7				2.8
MW-3D	10/1/95			0.05	0.07	1.1		0.08	3.4				12
MW-3D	2/1/96			0.06	<0.05	<0.6		<0.05	2.1				4.8
MW-3D	5/1/96			<0.05	<0.05	0.6		<0.05	2.8				2.9
MW-3D	9/1/96			<0.05	<0.05	<0.6		<0.05	8				32
MW-3D	12/1/96			<0.05	<0.05	<0.6		<0.05	1.3				1.5
MW-3D	3/1/97			<0.05	<0.05	<0.6		<0.05	<0.9				<0.9
MW-3D	3/1/97	Duplicate DUP #3		<0.05	<0.05	<0.6		<0.05	<0.9				<0.9
MW-3D	10/1/97			0.09	0.1	<0.25		<0.01	0.79				1.4
MW-3D	3/1/98			0.07	0.06	<0.6		<0.05	<0.9				1
MW-3D	3/1/98	Duplicate MW-103D		0.082	0.092	<0.6		<0.05	<0.9				<0.9
MW-3D	10/1/98			0.14	0.19	<0.06		<0.05	<0.9				<0.9
MW-3D	3/1/99			0.13	0.13	<0.6		0.21	<1				<2
MW-4S	10/2/91			1.3C	1.6C	<1.2		5.9C	<1.8	<0.05		<2.0	<1.8
MW-4S	4/2/93			4.5(2)	1.7(2)	2.7		5.8(2)	15	<0.05		1.1	37
MW-4S	9/1/93			9.2(2)	3.5(2)	22		15(2)	200	<0.05		9	420
MW-4S	4/1/95			19	8.7	23		31	160	<1.0		<1	34
MW-4S	10/1/95			8.7	3.6	5.3		<0.5	5.6	<0.5		<1	<0.9
MW-4S	2/1/96			12	4.3	3		15	9.1	<0.5		<1	2.3
MW-4S	5/1/96			19	11	9.8		26	28	<0.05		<1	5.1
MW-4S	9/1/96			10	10	4.6		15	3.6	1		<1	<0.9
MW-4S	12/1/96			17	9.3	15		<0.05	24	<0.05		<1	1.3
MW-4S	3/1/97			8.3	<0.5	16		22	32	<0.5		<1	<0.9
MW-4S	10/1/97			20	10	13.5		40	25	1.00		0.57	4
MW-4S	3/1/98			<0.5	<0.5	3.6		<0.5	6.9	<0.5		<1	<0.9
MW-4S	3/1/98	Duplicate MW-104S		NA	NA	NA		NA	NA	NA		NA	NA
MW-4S	10/1/98			10	14	6.24		20	11.1	<1		<1	<0.9
MW-4S	3/1/99			15	7.6	22		26	68	<2.5		<5	23
MW-4D	10/2/91			3.2C	4.9C	17		13C	360			10	1100
MW-4D	4/2/93			5.7(2)	2.4(2)	6		16(2)	150			6.8	470
MW-4D	9/1/93			5.3(2)	3.5(2)	10		13(2)	130			12	500
MW-4D	4/1/95			4.5	3.5	5.4		10	380			5.5	1100
MW-4D	10/1/95			2.8	5.6	3.6		7.1	220			1.4	590
MW-4D	2/1/96			1.3	1.1	3.3		2.9	170			1.3	400
MW-4D	5/1/96			2.5	4.1	3.8		6.4	320			2.6	910
MW-4D	9/1/96			3.4	4.5	4.6		7.1	260			2.2	740
MW-4D	12/1/96			6.2	4.7	6.1		<0.05	290			2.6	700
MW-4D	3/1/97			4.4	<0.5	8		<0.5	240			<10	630
MW-4D	10/1/97			4	2	3.6		10	98.2			1.1	304.8
MW-4D	3/1/98			<0.1	<0.1	2.4		<0.1	117			<1.6	223.9
MW-4D	10/1/98			3.1	3.6	<0.6		9.2	123			1.94	341.3
MW-4D	3/1/99			4.1	3.1	17		8.6	220			9	570
MW-5D	9/1/93			<0.05	<0.05	<0.60		<0.05	<0.9			<1	<0.9
MW-5D	4/1/95			<0.05	0.15	<0.60		0.08	<0.9			<1	13
MW-5D	10/1/95			<0.05	<0.05	<0.60		<0.05	<0.9			<1	<0.9
MW-5D	2/1/96			<0.05	<0.05	<0.60		<0.05	<0.9			<1	<0.9
MW-5D	5/1/96			<0.05	<0.05	<0.60		<0.05	<0.9			<1	<0.9

Appendix C
Compilation of Groundwater Data

Well ID	Date	Duplicate	4,4-DDD ug/l	a-BHC ug/l	b-BHC ug/l	Benzene ug/l	Chlordane ug/l	d-BHC ug/l	Ethylbenzene ug/l	g-BHC ug/l	MTBE ug/l	Toluene ug/l	Xylenes ug/l
MW-5D	9/1/96			<0.05	0.06	<0.60		<0.05	<0.9			<1	<0.9
MW-5D	12/1/96			<0.05	0.11	<0.60		<0.05	<0.9			<1	<0.9
MW-5D	3/1/97			<0.05	<0.05	<0.60		<0.05	2			<1	<0.9
MW-5D	10/1/97			0.02	0.2	0.3		0.05	21			0.43	95.8
MW-5D	3/1/98			0.05	0.19	<0.6		<0.05	31.4			<1	145
MW-5D	3/1/99			<0.3	0.16	<0.6		0.23**	5			<5	13
MW-5D	3/1/99	Duplicate MW-105D		<0.3	0.16	<0.6		0.19**	5			<5	13
MW-6S	9/1/93					1.1(2)	<1						
MW-6S	4/1/95					<0.6	<1						
MW-6S	10/1/95					<0.6	1.34						
MW-6S	2/1/96					<0.6	<1						
MW-6S	5/1/96					<0.6	<1						
MW-6S	9/1/96					<0.6	<1						
MW-6S	12/1/96					<0.6	<1						
MW-6S	3/1/97					<0.6	<1						
MW-6S	10/1/97					<0.25	<0.75						
MW-6S	3/1/98					<0.6	<0.75						
MW-6S	3/1/98	Duplicate MW-106S				<0.6	<0.76						
MW-6S	3/1/99					<0.6	<1						
MW-6D	9/1/93						<1						
MW-6D	4/1/95						<1						
MW-6D	10/1/95						<1						
MW-6D	2/1/96						<1						
MW-6D	5/1/96						<1						
MW-6D	9/1/96						<1						
MW-6D	12/1/96						<1						
MW-6D	3/1/97						<1						
MW-6D	10/1/97						<0.75						
MW-6D	3/1/98						<0.75						
MW-6D	3/1/99						<1						
MW-7S	9/1/93				<0.05		<1						
MW-7S	4/1/95				<0.10		3.4						
MW-7S	10/1/95				<0.10		8.2						
MW-7S	10/1/95	Duplicate MW-107S			<0.10		6.5						
MW-7S	2/1/96				<0.05		4.7						
MW-7S	5/1/96				<0.10		3.4						
MW-7S	9/1/96				<0.10		11						
MW-7S	9/1/96	Duplicate MW-200			<0.10		9.2						
MW-7S	12/1/96				<0.05		<1						
MW-7S	3/1/97				<0.10		<1						
MW-7S	10/1/97				0.06		<0.75						
MW-7S	3/1/98				<0.05		<0.77						
MW-7S	3/1/99				<0.05		<1						
MW-7D	9/1/93				<0.05				<0.9				<0.9
MW-7D	4/1/95				<0.05				<0.9				<0.9
MW-7D	10/1/95				<0.05				<0.9				<0.9
MW-7D	2/1/96				<0.05				1.0				4.8
MW-7D	2/1/96	Duplicate MW-107D			<0.05				<0.9				<0.9
MW-7D	5/1/96				<0.05				<0.9				24
MW-7D	9/1/96				<0.05				<0.9				5.1
MW-7D	12/1/96				<0.05				1.1				1.2
MW-7D	12/1/96	Duplicate DUP-3			<0.05				<0.9				1.1
MW-7D	3/1/97				<0.05				<0.9				<0.9
MW-7D	10/1/97				0.04				<0.43				<1.0
MW-7D	3/1/98				<0.05				<0.9				<0.9
MW-7D	3/1/99				<0.3				<1				<2
MW-8S	9/1/93		<0.1	0.14(2)	0.61(2)	6	<1	0.09(2)	2000	<0.05		9.2	5900
MW-8S	4/1/95		0.15	0.05	<0.05	1	1.1	0.11	83	<0.05		<1	160
MW-8S	10/1/95		<0.1	<0.05	<0.05	<0.6	<1	<0.05	17	<0.05		<1	46
MW-8S	2/1/96		<0.1	<0.05	<0.05	2.3	<1	<0.05	60	<0.05		1.7	490
MW-8S	5/1/96		<0.1	<0.05	<0.05	1.6	<1	0.05	80	<0.05		1.5	710
MW-8S	9/1/96		<0.1	<0.05	<0.05	<0.6	<1	<0.05	<0.9	<0.05		<1	19
MW-8S	12/1/96		<0.1	<0.05	<0.05	0.8	<1	<0.05	8.5	<0.05		<1	30
MW-8S	3/1/97		<0.1	<0.05	<0.05	0.7	<1	<0.05	17	<0.05		<1	75
MW-8S	10/1/97		<0.01	0.03	0.04	0.57	<0.78	0.02	6.6	0.03		<0.31	9.2

Appendix C
Compilation of Groundwater Data

Well ID	Date	Duplicate	4,4-DDD ug/l	a-BHC ug/l	b-BHC ug/l	Benzene ug/l	Chlordane ug/l	d-BHC ug/l	Ethylbenzene ug/l	g-BHC ug/l	MTBE ug/l	Toluene ug/l	Xylenes ug/l
MW-8S	3/1/98		<0.01	<0.05	<0.05	<0.6	<0.75	<0.05	1.3	<0.01		<1	10.8
MW-8S	10/1/98		<0.04	<0.05	<0.05	<0.6	<0.23	<0.05	<0.9	<0.04		<1	<0.9
MW-8S	3/1/99		<0.1	0.02	<0.05	<0.6	<1	0.09	1	<0.05		<5	<2
MW-8D	9/1/93		<0.1	<0.05	<0.05	<0.6		<0.05	26			<1	87
MW-8D	4/1/95		0.12	0.16	<0.05	2.3		<0.05	21			<1	79
MW-8D	10/1/95		<0.1	0.08	<0.05	<0.6		<0.05	20			<1	15
MW-8D	2/1/96		<0.1	<0.05	<0.05	0.6		<0.05	6.1			<1	85
MW-8D	5/1/96		<0.1	0.08	0.06	<0.6		<0.05	7.0			1.2	120.0
MW-8D	5/1/96	Duplicate DUP-2	<0.1	0.06	0.06	<0.6		<0.05	6.1			1.1	120
MW-8D	9/1/96		<0.1	0.06	0.05	<0.6		<0.05	1.8			<1.0	23
MW-8D	12/1/96		<0.1	<0.05	<0.05	0.9		<0.05	6.7			1.3	80
MW-8D	3/1/97		<0.1	<0.05	<0.05	<0.6		<0.05	4.5			1.3	54
MW-8D	10/1/97		0.05	0.2	0.04	0.58		0.02	3.8			0.81	40.3
MW-8D	3/1/98		0.055	0.36	<0.05	0.77		<0.05	4.3			<1	16.8
MW-8D	10/1/98		<0.04	0.41	<0.05	<0.6		0.087	11.5			<1	29.24
MW-8D	3/1/99		<0.10	0.19	0.08	<0.6		0.1	4			<5	7
MW-9D	9/1/93		3	0.25	0.32	2.2(2)		0.41	2(2)	<0.05	<5	<1	7.4(2)
MW-9D	4/1/95		0.71	0.21	0.74	2.9		0.34	1.7	<0.05	<5	<1	2.8
MW-9D	4/1/95	Duplicate MW-109	0.55	0.24	0.78	2.6		0.33	3.6	<0.05	<5	4.0(1)	<0.9
MW-9D	10/1/95		0.87	0.27	1.3	<0.6		0.87	<0.9	<0.05	<5	<1	<0.9
MW-9D	2/1/96		1.1	0.31	1.5	1.9		0.63	2.8	<0.05	3.9	<1	<0.9
MW-9D	5/1/96		<0.1	0.57	3.1	2.2		1.2	2.6	<0.05	<5	<1	<0.9
MW-9D	9/1/96		<0.1	0.46	3.6	0.8		1.6	1.1	<0.05	<5	<1	<0.9
MW-9D	12/1/96		<0.1	0.63	3.5	1.1		0.77	<0.9	<0.05	5.9	<1	<0.9
MW-9D	12/1/96	Duplicate DUP-2	<0.1	0.68	3.9	1.1		0.81	<0.9	<0.05	<5	<1	<0.9
MW-9D	3/1/97		<1	<0.5	6.7	0.6		<0.5	<0.9	<0.5	<5	<1	<0.9
MW-9D	3/1/97	Duplicate DUP #2	<1	<0.5	5.3	0.6		<0.5	<0.9	<0.5	<5	<1	<0.9
MW-9D	10/1/97		0.2	0.9	3	0.47		0.8	<0.43	<0.05	4.6	<0.31	0.66
MW-9D	3/1/98		0.18	0.47	3.3	<0.6		0.6	<0.9	0.019	<5	<1	<0.9
MW-9D	10/1/98		0.21	1.2	3.7	0.61		0.81	<0.9	<0.04	<5	<1	<0.9
MW-9D	3/1/99		0.12	0.4	2	<0.6		0.57	<1	<0.1	<5	<5	<2
MW-10S	9/1/93		<0.1	2	70	<0.6	<1	37		1.2			
MW-10S	4/1/95		<1	3.6	47	8.8	<10	16		1.6			
MW-10S	10/1/95		<1	2.6	28	3.2	<10	12		0.98			
MW-10S	2/1/96		<1	4	17	2.6	<10	9		3.4			
MW-10S	2/1/96	Duplicate MW-110S	<1	5	19	2.7	<10	10		4.1			
MW-10S	5/1/96		<0.1	6.8	32	3.9	7.5	16		6.6			
MW-10S	9/1/96		<0.1	<0.05	<0.05	4.7	<1	<0.05		<0.05			
MW-10S	12/1/96		<0.1	4.7	23	3.8	<1	9.3		3.4			
MW-10S	3/1/97		<1	5.7	46	2.2	<10	12		3.7			
MW-10S	10/1/97		<0.1	0.8	8	3.4	<0.77	3		0.5			
MW-10S	3/1/98		<0.2	2.2	19	1	<0.75	6.6		1.1			
MW-10S	3/1/98	Duplicate MW-110S	<0.3	1.9	17	1.1	<0.75	6.5		1.1			
MW-10S	10/1/98		0.73	3.5	24	2.69	<0.23	9		2.3			
MW-10S	3/1/99		<2	2.7	23	1.4	<20	9		1.8			
MW-10D	9/1/93			1	6.2	2.4		12	1.4	1	<5		7
MW-10D	9/1/93	Duplicate MW-110D		1.2	6	2.7		12	1.9	1.1	<5		8.6
MW-10D	4/1/95			0.55	4.6	20		0.59	1.5	0.87	20		5.8
MW-10D	10/1/95			<0.05	2.6	4.7		0.07	1.1	<0.05	11		2.1
MW-10D	2/1/96			0.15	1.2	2		0.11	<0.9	0.09	<2		<0.9
MW-10D	5/1/96			<0.05	1.27	2.0		0.05	<0.9	<0.05	67.0		<0.9
MW-10D	9/1/96			4.2	15	2.5		14	<0.9	3.8	81		<0.9
MW-10D	12/1/96			<0.05	<0.05	4.6		<0.05	<0.9	<0.05	160		<0.9
MW-10D	3/1/97			<0.05	<0.05	2.5		<0.05	<0.9	<0.05	120		<0.9
MW-10D	10/1/97			<0.01	0.3	5.1		0.02	<0.43	<0.01	298		<1
MW-10D	3/1/98			<0.05	0.19	3		<0.05	<0.9	0.015	246		<0.9
MW-10D	10/1/98			0.065	0.6	5.56		0.086	<0.9	0.086	289		<0.9
MW-10D	3/1/99			<0.3	0.12	5.4		<0.3	<1	<0.3	210		<2
MW-12	9/1/93		<0.10										
MW-12	9/1/93	Duplicate MW-112	<0.10										
MW-12	4/1/95		<0.10										
MW-12	10/1/95		<0.10										
MW-12	2/1/96		<0.10										
MW-12	5/1/96		<0.10										
MW-12	9/1/96		<0.10										

Appendix C
Compilation of Groundwater Data

Well ID	Date	Duplicate	4,4-DDD ug/l	a-BHC ug/l	b-BHC ug/l	Benzene ug/l	Chlordane ug/l	d-BHC ug/l	Ethylbenzene ug/l	g-BHC ug/l	MTBE ug/l	Toluene ug/l	Xylenes ug/l
MW-12	12/1/96		<0.10										
MW-12	3/1/97		<0.10										
MW-12	10/1/97		0.04										
MW-12	3/1/98		0.03										
MW-12	10/1/98		<0.04										
MW-12	3/1/99		<0.1										
MW-16S	10/1/97		<0.3	5	20	2.4		8	<0.43	5	<0.63		2.1
MW-16S	3/1/98		<0.1	0.84	6.7	<0.6		2.1	<0.9	0.88	<5		<0.9
MW-16S	10/1/98		<0.04	1	8.3	<0.6		2.8	<0.9	1.3	<5		<0.9
MW-16S	3/1/99		<1	4.1	1.7	2.2		6.3	<1	2.8	<5		<2
MW-16D	10/1/97		0.3	1	10	5.4		5	0.55	0.5	40.6		<1
MW-16D	3/1/98		<0.01	5.2	17	5.5		8.3	<0.9	5.6	43.9		<0.9
MW-16D	10/1/98		<1	4.5	21	8.02		8.3	1.41	4.5	46.5		2.44
MW-16D	3/1/99		<1	1.9	15	8		6.5	<1	1.2	46		<2
MW-16D	3/1/99	Duplicate MW-116D	<1	1.6	13	8		5.7	<1	1.1	45		<2
MW-17	10/1/98			7.5	ND	1.76		14	95.7	3.8			51
MW-17	10/1/98	Dulpicate MW-117		8.5	ND	1.74		16	89.9	4.8			46.8
MW-17	3/1/99			5.6	5.3	5.1		11	11	1.9			2
MW-D	10/2/90							ND					
MW-D	10/1/91							ND					
MW-D	4/1/93							ND					
MW-D	9/1/93							ND					
MW-D	4/1/95							ND					
MW-D	10/1/95							ND					
MW-D	2/1/96							ND					
MW-D	5/1/96							ND					
MW-D	9/1/96							ND					
MW-D	12/1/96							ND					
MW-D	3/1/97							ND					
MW-D	10/1/97							ND					
MW-D	3/1/98							ND					
MW-D	3/1/99							0.08					
MW-P	10/1/90			4.5	22	<1.0		5.9	<1.0	1.5			<1.0
MW-P	10/2/91			3.8C	5.7C	6.9		5.5C	2.9	2.8C			110
MW-P	4/2/93			4.5(2)	14(2)	<0.6		4(2)	2	2.1(2)			66
MW-P	9/1/93			6.2	15	<0.6		8.8	<0.9	3.6			7.8
MW-P	4/1/95			3	25	<0.6		13	<0.9	2.4			<0.9
MW-P	4/1/95	Duplicate MW-PP		2.8	24	<0.6		12	<0.9	2.4			<0.9
MW-P	10/1/95			2.3(1)	10(1)	0.7		4.3(1)	<0.9	2.3(1)			<0.9
MW-P	10/1/95	Duplicate MW-PP		2.3	12	<0.6		4.9	<0.9	2.4			<0.9
MW-P	2/1/96			1.1	11	<0.6		3.4	<0.9	1.3			<0.9
MW-P	5/1/96			4.1	26	1.4		8.4	<0.9	4.1			<0.9
MW-P	5/1/96	Duplicate DUP-1		5.6	34	1.3		12	<0.9	5.8			<0.9
MW-P	9/1/96			2.3	12	<0.6		4.2	<0.9	2.7			<0.9
MW-P	9/1/96	Duplicate MW-100		1.1	10	<0.6		2.7	<0.9	1.3			<0.9
MW-P	12/1/96			5.4	12	1.4		5.6	1.1	5.7			<0.9
MW-P	3/1/97			13	31	3.4		12	<0.9	15			<0.9

Note The data in the groundwater data tables were compiled from electronic files of the summary tables in reports such as the Remedial Investigation. Geomega is currently using the original analytical laboratory sheets to perform a QA check on the database and fill in detection limits where there is currently a value of "ND" or "BDL" in the database.

Appendix C
Compilation of Groundwater Data (Natural Attenuation Scoring Parameters)

Well ID	Date	Duplicate	Alkalinity mg/l	Dissolved Oxygen mg/l	Eh mV	Fe 2+ mg/l	Methane mg/m^3	Nitrate-N mg/l	pH	Sulfate mg/l	Sulfide mg/l	Temperature °C	Total Organic Carbon mg/l
MW-1D	12/1/96		<5	0.2	-45.1	1.04		<1	5.3	46		25	43
MW-1D	3/1/97		<5	0.57	-31.3	0.76	6.7	<1	5.4	13		24.7	39
MW-1D	10/1/97		28	0.35	22.7	0.75		<0.01	5.3	48.4	<0.2	25.4	41.1
MW-1D	3/1/98			0.37	30.2	0.64			5.3			23.8	
MW-1D	3/19/98		10					<0.02		41.4	1.66		34.1
MW-1D	10/1/98			0.66	-59	0.55			4.9			25	
MW-1D	10/14/98		22					<0.02		47	2.6		28.8
MW-1D	3/1/99		6	0.72	155.1	0.66		<0.1	4.9	83	11	25	45
MW-1S	12/1/96		26	0.3	-28.4	0.75		<1	5.2	110		25	43
MW-1S	3/1/97		20	0.79	2.1	0.77	4.2	<1	5.5	86		24.1	46
MW-1S	10/1/97		28	0.6	72.8	1.08		<0.01	5.3	162	<0.2	26.8	57
MW-1S	3/1/98			1.02	130.3	1.18			5.5			22.5	
MW-1S	3/19/98		14					<0.02		21.2	<1		8.9
MW-1S	10/1/98			1.14	52.2	1.73			5			26.5	
MW-1S	10/14/98		22					0.14		109	<1		28.5
MW-1S	3/1/99		25	0.94	187	2.13		<0.1	5.2	180	3	25	46
MW-2D	12/1/96		82	0.2	-72.3	0.54		<1	5.9	44		25	28
MW-2D	3/1/97		73	0.47	-57.7	0.42	3.1	<1	6.1	39		24.5	28
MW-2D	10/1/97		87	1.37	-17.9	NA		0.03	5	19.6	0.2	25.8	34.2
MW-2D	3/1/98			0.81	-0.1	0.39			6.1			23.7	
MW-2D	3/19/98		50					<0.02		28.6	1.08		22.3
MW-2D	10/1/98			1.19	-124	0.31			5.7			26.5	
MW-2D	10/14/98		64					<0.02		89	1.1		31.3
MW-2D	3/1/99		66	0.34	126.5	0.2		<0.1	5.6	20	4	24.7	30
MW-2S	12/1/96		190	0.9	379.8	0.14		<1	6.4	60		NA	20
MW-2S	3/1/97		210	1.16	15.2	0.04	<1	1.2	6.6	64		23.8	23
MW-2S	10/1/97		202	1.22	131.5	0.17		0.06	5.2	76.8	<0.2	27.2	18.2
MW-2S	3/1/98			2.7	104.1	0.03			6.6			21.7	
MW-2S	3/19/98		70					5.57		8.93	<1		9.15
MW-2S	10/1/98			2.78	-62.2	0			6.2			26.7	
MW-2S	10/14/98		120					3.7		32	<1		16.2
MW-2S	3/1/99		190	1.83	390.8	0.19		0.3	6	100	<1	23.8	24
MW-3D	12/1/96		11	0.2	20.2	1.41		<1	4.9	26		25	33
MW-3D	3/1/97		<5	0.43	-12.8	1.66	<1	<1	5	35		24.1	27

Appendix C
Compilation of Groundwater Data (Natural Attenuation Scoring Parameters)

Well ID	Date	Duplicate	Alkalinity mg/l	Dissolved Oxygen mg/l	Eh mV	Fe 2+ mg/l	Methane mg/m^3	Nitrate-N mg/l	pH	Sulfate mg/l	Sulfide mg/l	Temperature °C	Total Organic Carbon mg/l
MW-3D	3/1/97	Duplicate DUP #3	<5				<1	<1		34			27
MW-3D	10/1/97		10	0.77	57.7	1.94		<0.01	4.9	39.8	<0.2	24.7	25.9
MW-3D	3/1/98			0.55	123.5	2.12			4.8			23.2	
MW-3D	3/20/98		10					<0.02		40.4	<1		17.6
MW-3D	10/1/98			0.74	-105.6	2.66			4.6			24.7	
MW-3D	10/14/98		8					0.13		70	<1		25.5
MW-3D	3/1/99		5	0.5	207.2	2.15		<0.1	4.6	82	2	24.4	25
MW-3S	12/1/96		81	1.8	-41.7	0.07		<1	5.8	28		25	32
MW-3S	3/1/97		45	2.14	-63.4	0.08	1.3	<1	5.9	<5		22.9	29
MW-3S	10/1/97		70	2.21	-11.1	0.13		<0.01	5.8	14.8	0.4	25.5	34
MW-3S	10/1/97	Duplicate of 3S	68					<0.01		23	0.8		23.1
MW-3S	3/1/98			0.66	91.6	0.13			5.7			20.3	
MW-3S	3/20/98		70					<0.02		22.8	<1		13.4
MW-3S	10/1/98			1.07	-114.8	0.2			5.5			26	
MW-3S	10/14/98		80					<0.02		20	<1		28.3
MW-3S	3/1/99		68	1.88	155.3	0.12		<0.1	5.5	36	5	23.7	26
MW-4D	12/1/96		<5	0.3	-10.4	0.76		<1	5.2	34		25	69
MW-4D	3/1/97		<5	0.5	-19.5	0.83	16	<1	5.3	32		23.7	60
MW-4D	10/1/97		599	0.9	36.9	0.83		<0.01	5.2	27.8	2.1	24.3	60.7
MW-4D	3/1/98			0.63	74	0.86			5			23.3	
MW-4D	3/20/98		<1					<0.02		25.2	6.56		49
MW-4D	10/1/98			0.72	-96.5	1.8			5			24.3	
MW-4D	10/14/98		18					0.11		<2.4	1.2		65
MW-4D	3/1/99		<1	0.31	72.2	1.33		<0.1	4.8	57	11	24.1	76
MW-4S	12/1/96		87	0.4	-15.9	0.35		<1	5.5	160		25	30
MW-4S	3/1/97		120	0.61	-60.7	0.17	16	<1	5.9	110		23.4	29
MW-4S	10/1/97		89	0.91	20.2	0.13		<0.01	5.8	20.2	1.5	25.1	27
MW-4S	3/1/98			0.63	105.5	0.47			5.7			21.3	
MW-4S	3/20/98		70					0.03		60.4	<1		18.6
MW-4S	10/1/98			1.09	-67	0.63			5.5			25.6	
MW-4S	10/14/98		46					0.11		278	<1		40
MW-4S	3/1/99		100	1.01	144.6	0.07		<0.1	5.6	72	6	23.8	41
MW-5D	12/1/96			NA	NA	NA			6			24	
MW-5D	3/1/97			NA	NA	NA			5.8			24.6	

Appendix C
Compilation of Groundwater Data (Natural Attenuation Scoring Parameters)

Well ID	Date	Duplicate	Alkalinity mg/l	Dissolved Oxygen mg/l	Eh mV	Fe 2+ mg/l	Methane mg/m^3	Nitrate-N mg/l	pH	Sulfate mg/l	Sulfide mg/l	Temperature °C	Total Organic Carbon mg/l
MW-5D	10/1/97			NA	NA	NA			5.9			24.1	
MW-5D	3/1/98			NA	NA	NA			5.6			23	
MW-5D	10/1/98			NA	NA	NA			NA			NA	
MW-5D	3/1/99			NA	NA	NA			5.5			23.7	
MW-5S	12/1/96			NA	NA	NA			6			24	
MW-5S	3/1/97			NA	NA	NA			5.9			24.3	
MW-5S	10/1/97			NA	NA	NA			6.1			24.8	
MW-5S	3/1/98			NA	NA	NA			6			22	
MW-5S	10/1/98			NA	NA	NA			NA			NA	
MW-5S	3/1/99			NA	NA	NA			5.8			23.3	
MW-6D	12/1/96			NA	NA	NA			5			24	
MW-6D	3/1/97			NA	NA	NA			4.6			24.4	
MW-6D	10/1/97			NA	NA	NA			4.8			24.5	
MW-6D	3/1/98			NA	NA	NA			4.5			23.4	
MW-6D	10/1/98			NA	NA	NA			NA			NA	
MW-6D	3/1/99			NA	NA	NA			4.3			23.5	
MW-6S	12/1/96			NA	NA	NA			5.2			23	
MW-6S	3/1/97			NA	NA	NA			4.9			23	
MW-6S	10/1/97			NA	NA	NA			5.3			25.4	
MW-6S	3/1/98			NA	NA	NA			4.6			23	
MW-6S	10/1/98			NA	NA	NA			NA			NA	
MW-6S	3/1/99			NA	NA	NA			4.9			22.1	
MW-7D	12/1/96		<5	0.2	12.5	2.13		<1	5	11		25	8.6
MW-7D	12/1/96	Duplicate DUP-3	<5					<1		11			7.7
MW-7D	3/1/97		<5	0.67	21.2	1.82	<1	<1	5	10		23.4	6
MW-7D	10/1/97		4	0.68	67.9	1.77		<0.01	4.9	6.45	<0.2	24.5	8.64
MW-7D	3/1/98			0.48	127.9	1.22			5.4			22.6	
MW-7D	3/19/98		10					<0.02		6.29	<1		5.17
MW-7D	10/1/98			NA	NA	NA			NA			NA	
MW-7D	3/1/99		<1	0.5	207.5	1.52		<0.1	4.6	13	<1	23.8	6
MW-7S	12/1/96		110	0.3	-0.8	0.06		<1	6.2	6		25	20
MW-7S	3/1/97		62	1.11	249.5	0.25	<1	<1	6.1	5		22.7	17
MW-7S	10/1/97		78	0.87	104.6	NA		<0.01	4.9	8.06	<0.2	25.7	23.8
MW-7S	3/1/98			0.79	208.6	0			6.3			20.6	

Appendix C
Compilation of Groundwater Data (Natural Attenuation Scoring Parameters)

Well ID	Date	Duplicate	Alkalinity mg/l	Dissolved Oxygen mg/l	Eh mV	Fe 2+ mg/l	Methane mg/m^3	Nitrate-N mg/l	pH	Sulfate mg/l	Sulfide mg/l	Temperature °C	Total Organic Carbon mg/l
MW-7S	3/19/98		130					0.08		9.59	<1		17.1
MW-7S	10/1/98			NA	NA	NA			NA			NA	
MW-7S	3/1/99		45	1.01	241.7	0.12		<0.1	5.4	<10	<1	23	19
MW-8D	12/1/96		<5	0.32	-42.3	0.49		<1	5.5	59		25	28
MW-8D	3/1/97		<5	0.33	-9.8	0.67	18	<1	5.2	69		24.2	27
MW-8D	10/1/97		18	0.34	2.5	0.63		<0.01	5.1	69.2	0.6	25.5	23.1
MW-8D	3/1/98			0.55	70.2	0.58			5			23.7	
MW-8D	3/18/98		50					<0.02		81.6	2.06		17.3
MW-8D	10/1/98			0.47	174	0.43			4.3			26.2	
MW-8D	10/13/98		14					0.03		55.9	1.6		23.5
MW-8D	3/1/99		1	0.35	162.8	0.2		<0.1	5	70	5	24.9	25
MW-8S	12/1/96		89	0.34	-71.2	1.14		<1	6.2	41		25	61
MW-8S	3/1/97		64	0.32	-7	0.27	6.4	<1	5.8	43		22.9	60
MW-8S	10/1/97		126	0.37	-18.1	2.97		<0.01	6.1	21.1	1.8	27.3	48.2
MW-8S	3/1/98			1.07	162.9	0.01			6.6			21.7	
MW-8S	3/18/98		100					1.04		47.4	<1		13.8
MW-8S	10/1/98			1	292	0.04			6			27.6	
MW-8S	10/13/98		140					0.79		12.9	<1		12.5
MW-8S	3/1/99		89	2.13	180.3	>RANGE		<0.1	5.9	<10	<1	25	69
MW-9D	12/1/96		140	0.58	-30.4	1.11		<1	6.7	5		25	47
MW-9D	12/1/96	Duplicate DUP-2	140					<1		5			46
MW-9D	3/1/97		130	0.23	-24.1	1.07	3.2	<1	6.2	7		24.5	45
MW-9D	3/1/97	Duplicate DUP #2	130				2	<1		8			45
MW-9D	10/1/97		115	0.66	30.7	NA		<0.01	6.2	22.5	<0.2	25.8	39.1
MW-9D	3/1/98			0.53	57.1	0.9			6.3			24	
MW-9D	3/18/98		130					0.03		198	<1		33.9
MW-9D	10/1/98			1.54	118.3	0.67			5.5			26.9	
MW-9D	10/13/98		124					<0.02		14.3	1.9		32.5
MW-9D	3/1/99		140	0.39	153.6	0.76		<0.1	6.3	<200	1	25.4	32
MW-10D	12/1/96		11	0.57	304.3	0.73		<1	5.2	17		24.5	22
MW-10D	3/1/97		7	0.38	25.7	0.63	<1	<1	4.5	18		24.6	21
MW-10D	10/1/97		10	0.38	85.4	0.64		0.02	4.9	18.4	<0.2	25.5	25.4
MW-10D	3/1/98			0.29	110.6	0.51			5.1			23.4	
MW-10D	3/18/98		20					0.02		28.5	<1		13.4

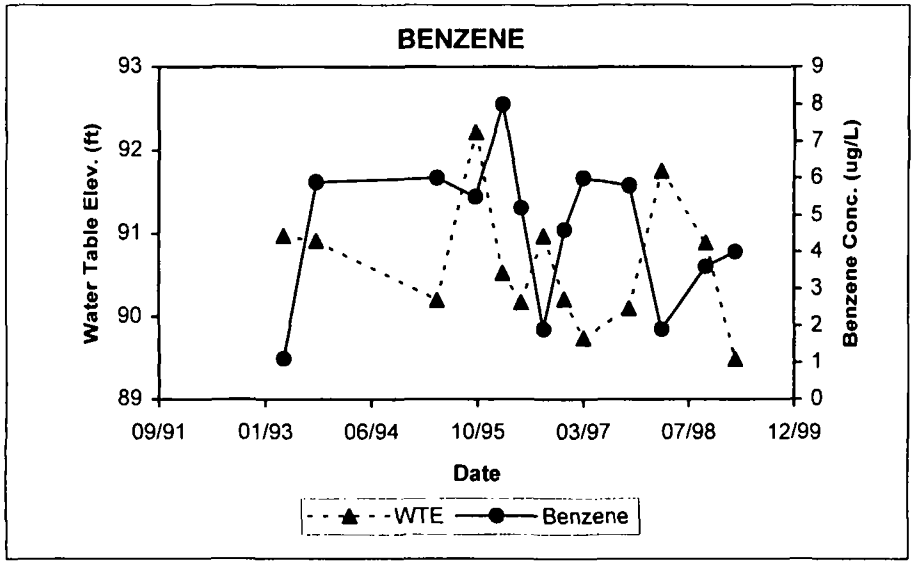
Appendix C
Compilation of Groundwater Data (Natural Attenuation Scoring Parameters)

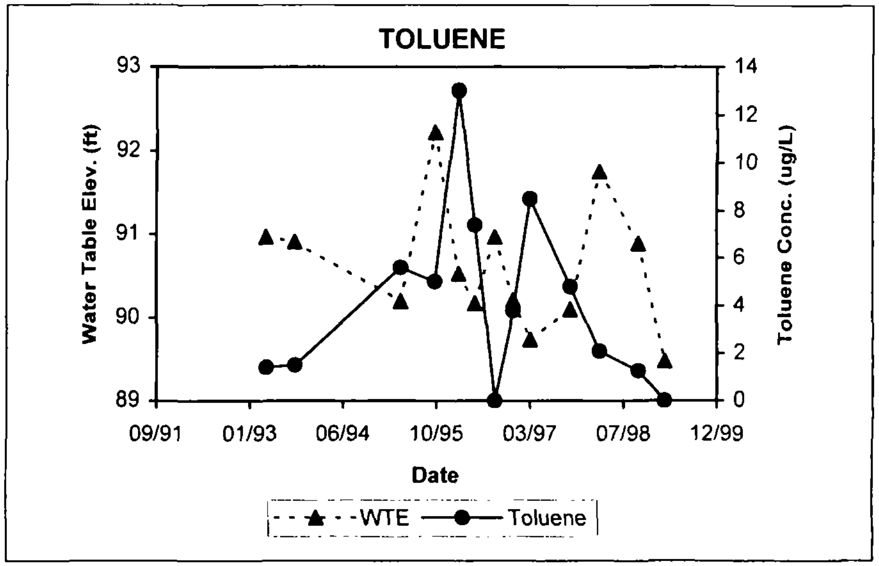
Well ID	Date	Duplicate	Alkalinity mg/l	Dissolved Oxygen mg/l	Eh mV	Fe 2+ mg/l	Methane mg/m^3	Nitrate-N mg/l	pH	Sulfate mg/l	Sulfide mg/l	Temperature °C	Total Organic Carbon mg/l
MW-10D	10/1/98			0.33	48	0.68			4			25.6	
MW-10D	10/13/98		6					<0.02		14.8	<1		19.2
MW-10D	3/1/99		13	0.25	243.4	0.42		<0.1	4.8	15	2	24.7	27
MW-10S	12/1/96		17	0.79	214.4	0.16		<1	5.7	79		25	29
MW-10S	3/1/97		16	0.55	164.2	0.17	<1	<1	5.3	65		23.6	9
MW-10S	10/1/97		15	0.5	184.8	0.21		0.22	5.3	15.9	0.4	26.5	14.9
MW-10S	3/1/98			1.53	159.8	0			5.6			22.2	
MW-10S	3/18/98		24					2.04		47.6	<1		24
MW-10S	10/1/98			1.16	276.6	0.1			4.6			27.2	
MW-10S	10/13/98		112					2.1		55.1	<1		16
MW-10S	3/1/99		47	0.81	261.9	0.13		0.6	5	50	<1	24.2	32
MW-11	12/1/96			NA	NA	NA			5.1			25	
MW-11	3/1/97		<5	0.7	527.7	0.01	<1	11	4.5	40		25.8	<5
MW-11	10/1/97		11	2.6	447.9	0.01		15.3	4.6	27.8	0.4	27.4	3.35
MW-11	3/1/98			0.49	415.4	0			4.4			25	
MW-11	3/17/98		8					17.3		56.1	<1		2.66
MW-11	10/1/98			NA	NA	NA			NA			NA	
MW-11	3/1/99		<1	2.01	427.7	0.01		16	4.2	55	<1	26.5	2
MW-12	12/1/96			NA	NA	NA			5.8			25.5	
MW-12	3/1/97		12	0.3	226.7	0.12	<1	<1	5.07	19		25.1	13
MW-12	10/1/97		23	1.89	289.6	0.18		0.6	5	16.3	<0.2	27.8	20.5
MW-12	3/1/98			0.5	274.7	0.04			5.1			24.3	
MW-12	3/17/98		22					0.04		26.9	<1		14.7
MW-12	10/1/98			3.06	371	0.08			4.5			27.2	
MW-12	10/13/98		14					<0.02		21.2	<1		8.9
MW-12	3/1/99		16	0.78	402.5	0.1		0.2	4.9	18	<1	25.3	18
MW-15	12/1/96		<5	0.91	643.6	0.03		<1	5.1	19		NA	4.7
MW-15	3/1/97		<5	0.95	389	0.01	<1	<1	5.1	21		24.4	<5
MW-15	3/1/97	Duplicate DUP #1	<5				<1	1.1		20			<5
MW-15	10/1/97		4	1.84	379.5	0.12		1.02	4.9	4.06	<0.2	26.8	1.99
MW-15	10/1/97	Duplicate MW-115	6					1.04		18.6	<0.2		1.01
MW-15	3/1/98			0.8	150.8	0.03			4.5			23.2	
MW-15	3/17/98		<1					0.58		30.1	<1		2.5
MW-15	10/1/98			1.02	297.9	0.07			3.9			26.9	

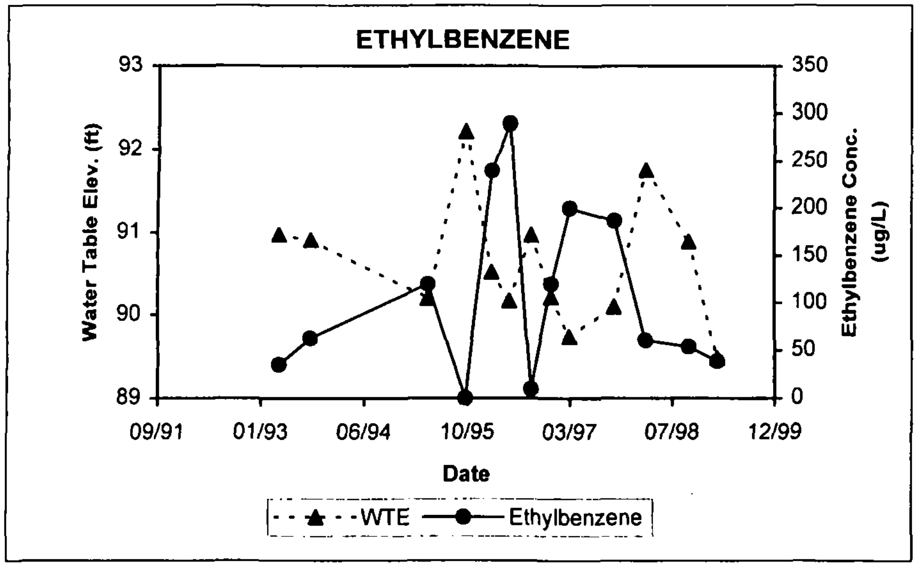
Appendix C
Compilation of Groundwater Data (Natural Attenuation Scoring Parameters)

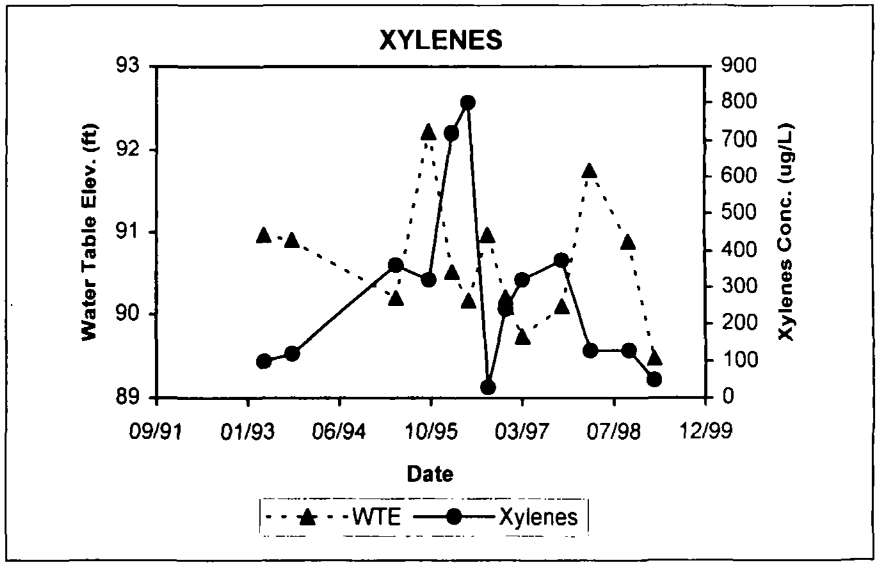
Well ID	Date	Duplicate	Alkalinity mg/l	Dissolved Oxygen mg/l	Eh mV	Fe 2+ mg/l	Methane mg/m^3	Nitrate-N mg/l	pH	Sulfate mg/l	Sulfide mg/l	Temperature °C	Total Organic Carbon mg/l
MW-15	10/13/98		<1					3.6		18.7	<1		<1
MW-15	3/1/99		<1	1.19	479.9	0		6.6	4.4	11	<1	24.6	1
MW-16D	12/1/96			NA	NA	NA			NA			NA	
MW-16D	3/1/97			NA	NA	NA			NA			NA	
MW-16D	10/1/97		6	0.48	97.1	2.22		<0.01	5.9	28.5	<0.2	25.2	11.4
MW-16D	3/1/98			NA	NA	NA			4.8			23.8	
MW-16D	10/1/98			NA	NA	NA			4.3			25.2	
MW-16D	3/1/99			NA	NA	NA			4.8			24.5	
MW-16S	12/1/96			NA	NA	NA			NA			NA	
MW-16S	3/1/97			NA	NA	NA			NA			NA	
MW-16S	10/1/97		100	1.93	170.5	1.94		0.09	6.3	74.5	0.4	25.5	11.2
MW-16S	3/1/98			NA	NA	NA			5.4			22.5	
MW-16S	10/1/98			NA	NA	NA			4.8			25.8	
MW-16S	3/1/99			1.07	311.4	0.15			5.6			24.3	
MW-17	3/1/99			0.59	139.6	0.06			5.9			24.1	
MW-A	12/1/96			NA	NA	NA			6.2			26.5	
MW-A	3/1/97			NA	NA	NA			5.8			25.1	
MW-A	10/1/97			NA	NA	NA			5.9			27.7	
MW-A	3/1/98			NA	NA	NA			NA			NA	
MW-A	10/1/98			NA	NA	NA			NA			NA	
MW-D	12/1/96		91	0.42	-46.2	0.08		<1	6.2	9		24	22
MW-D	3/1/97		96	0.57	-92.2	0.03	<1	<1	6	7		23.1	19
MW-D	10/1/97		38	0.81	123.9	0.06		<0.01	6.1	14.6	0.8	26.3	27.6
MW-D	3/1/98			1.04	-53.2	0.03			5.9			21.6	
MW-D	3/17/98		86					<0.02		39.2	<1		28.4
MW-D	10/1/98			NA	NA	NA			NA			NA	
MW-D	3/1/99		110					<0.1		17	<1		35

CHEVRON CHEMICAL - ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-1S



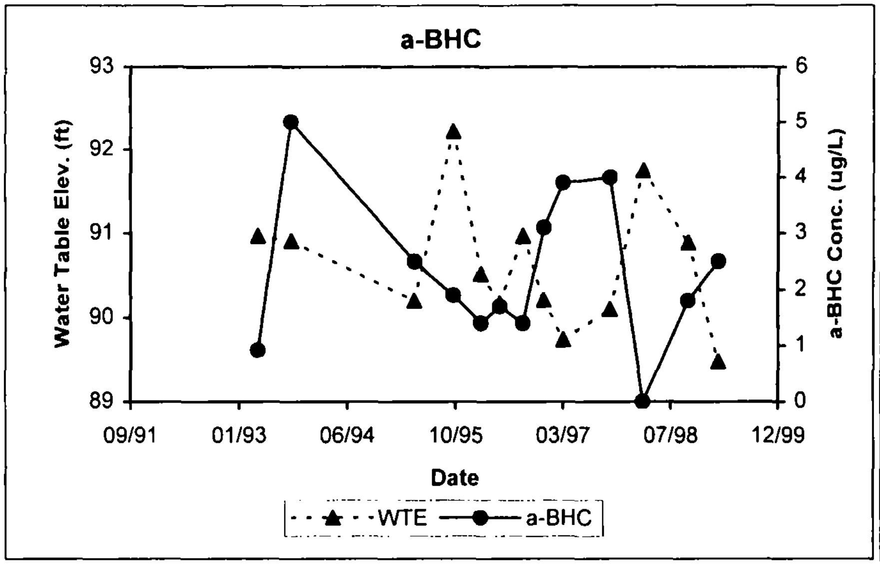


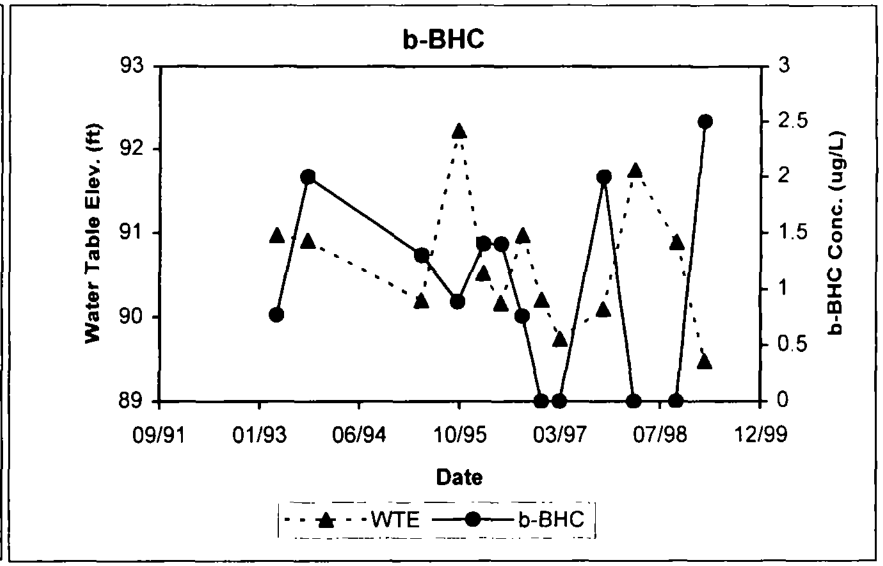


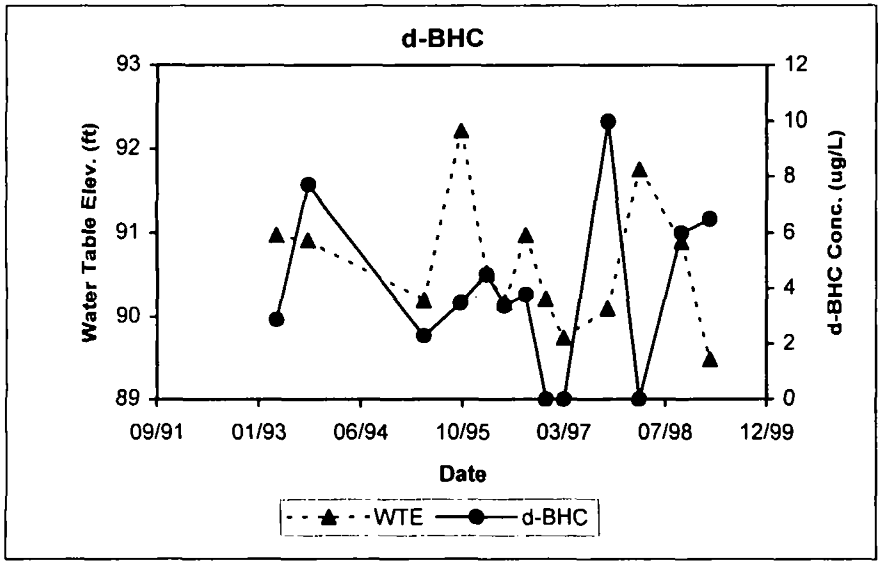


Data through 3/99

CHEVRON CHEMICAL - ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-1S





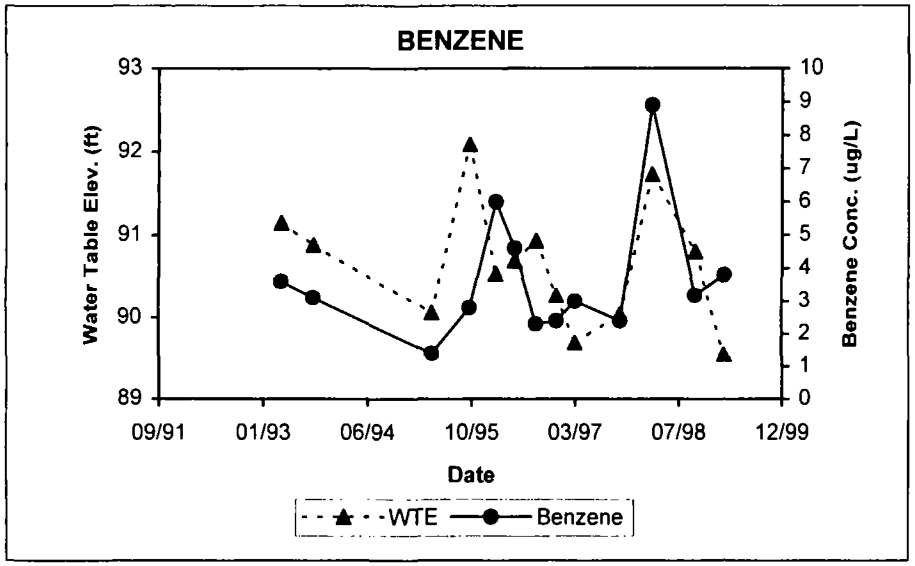


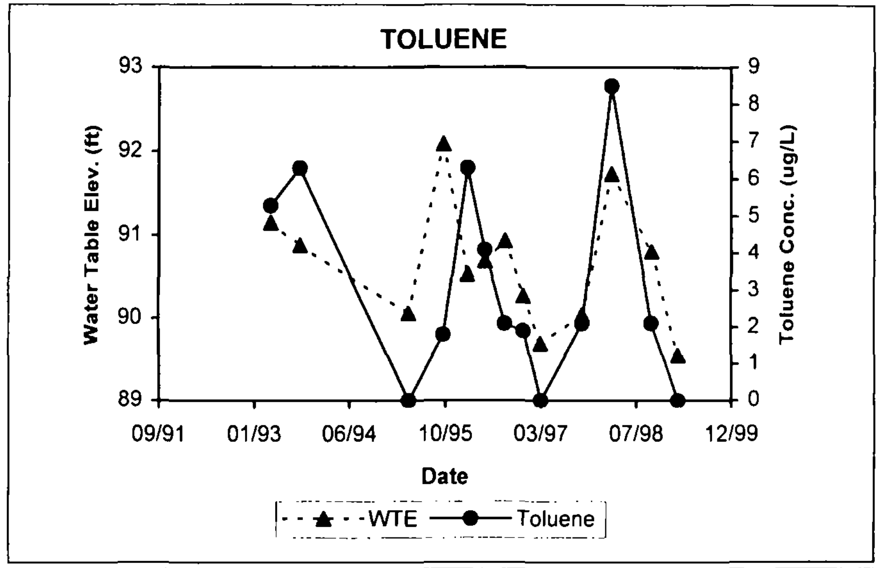
No g-BHC Detected

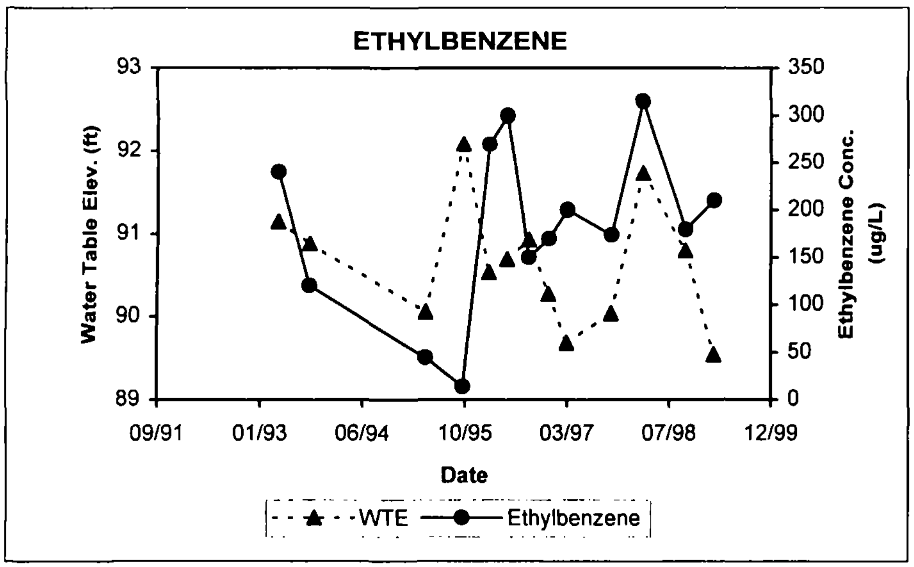
No Chlordane Detected

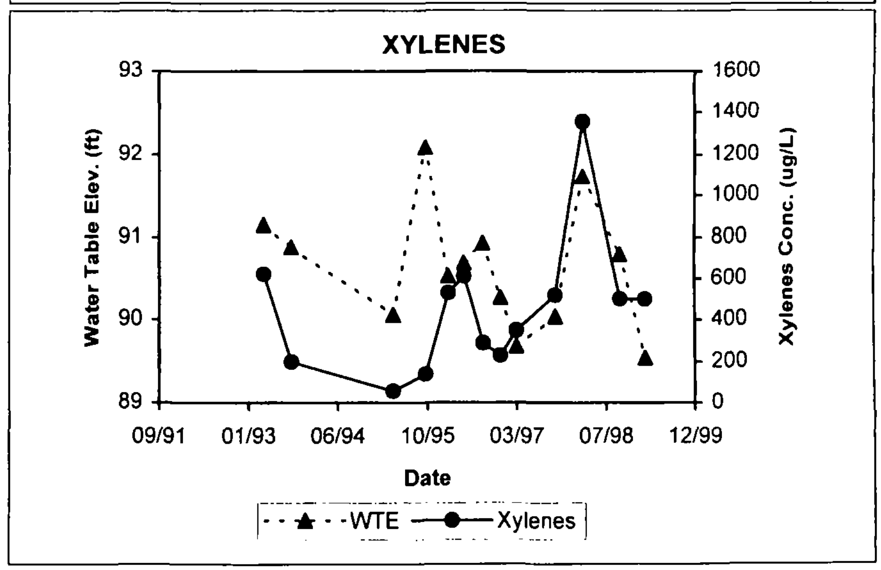
Data through 3/99

CHEVRON CHEMICAL - ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-1D



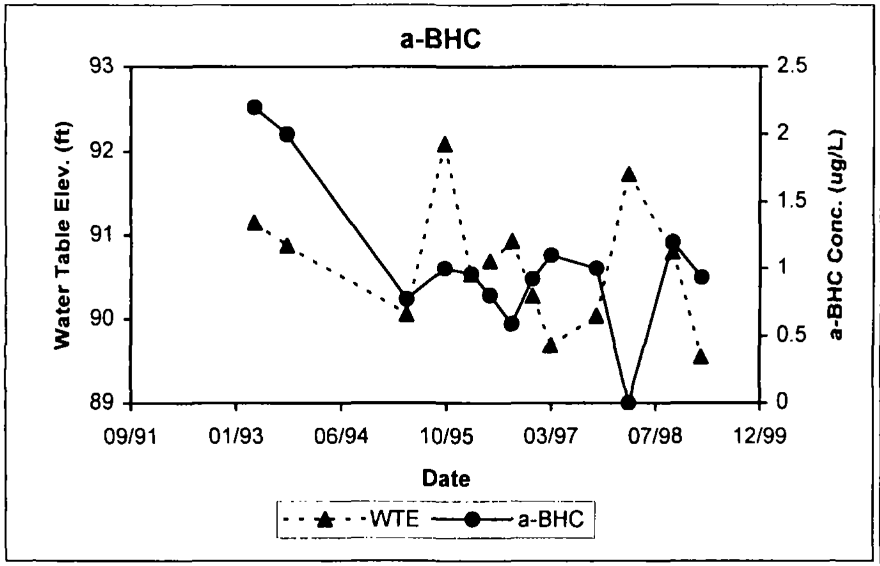


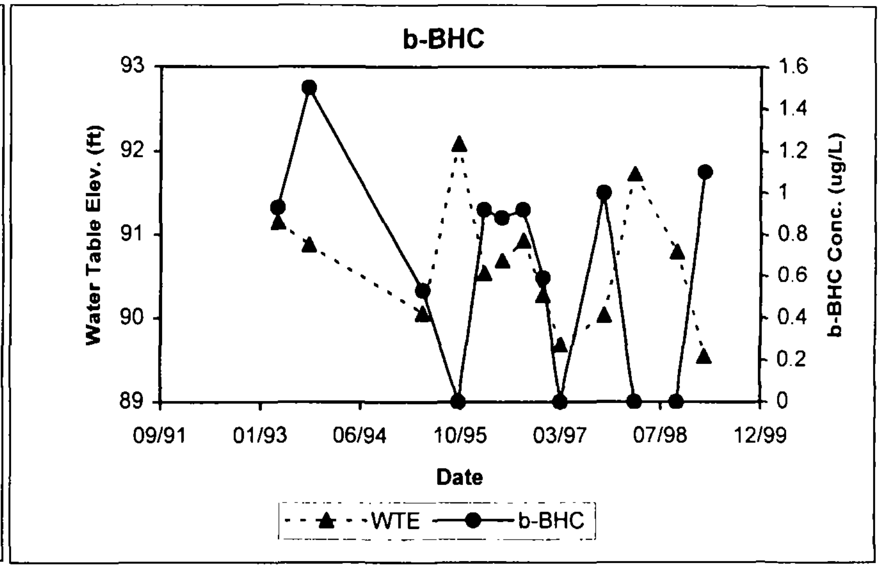


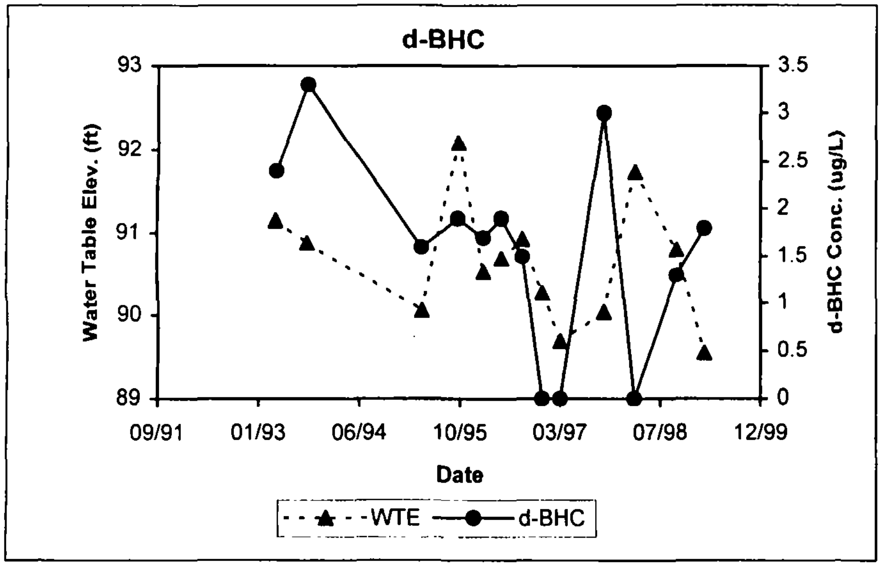


Data through 3/99

CHEVRON CHEMICAL - ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-1D





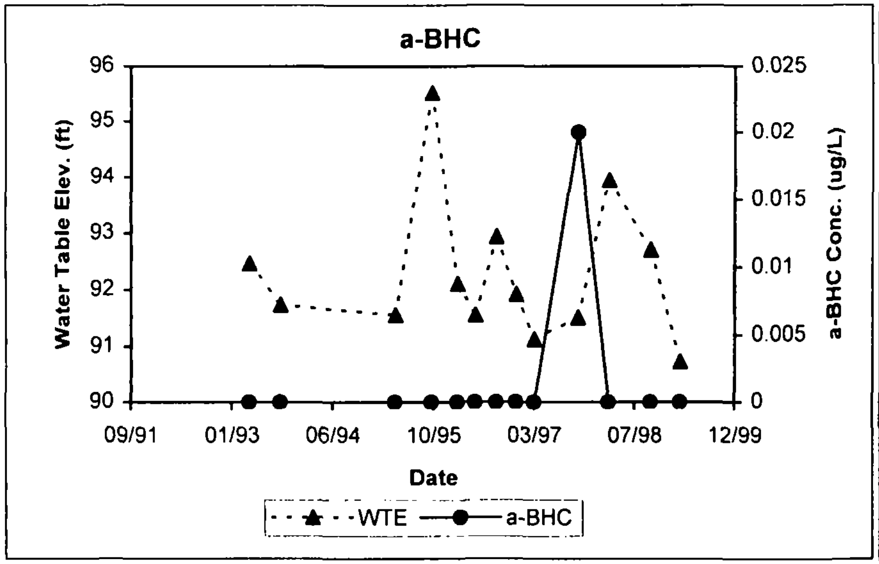


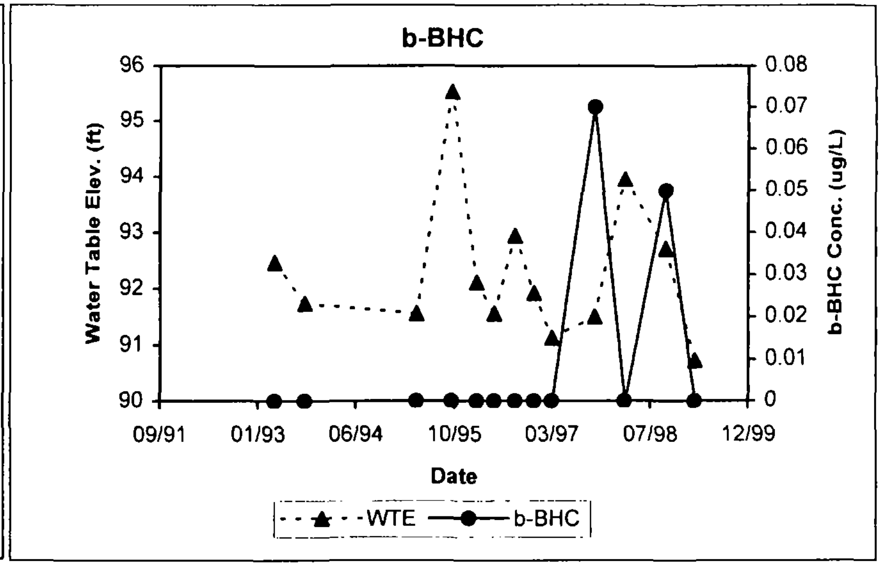
No g-BHC Detected

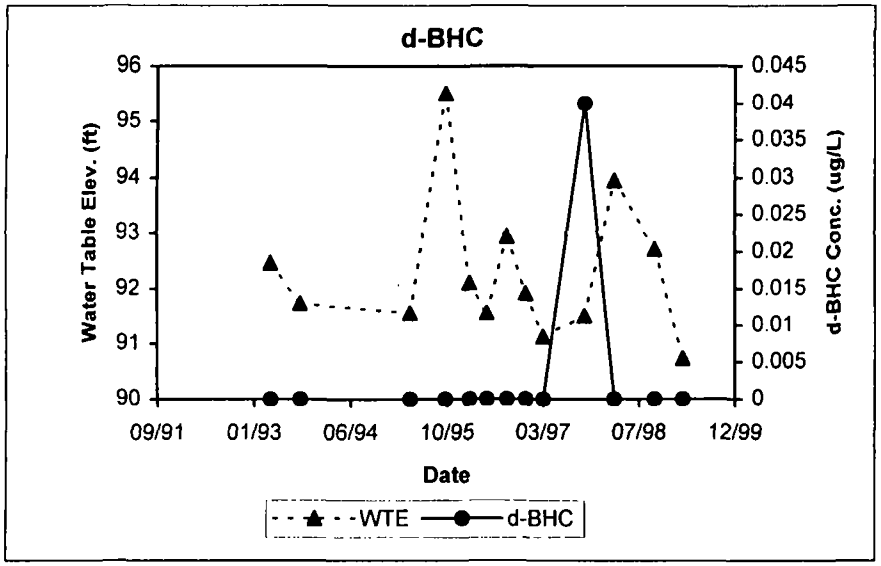
No Chlordane Detected

Data through 3/99

CHEVRON CHEMICAL - ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-2S







No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

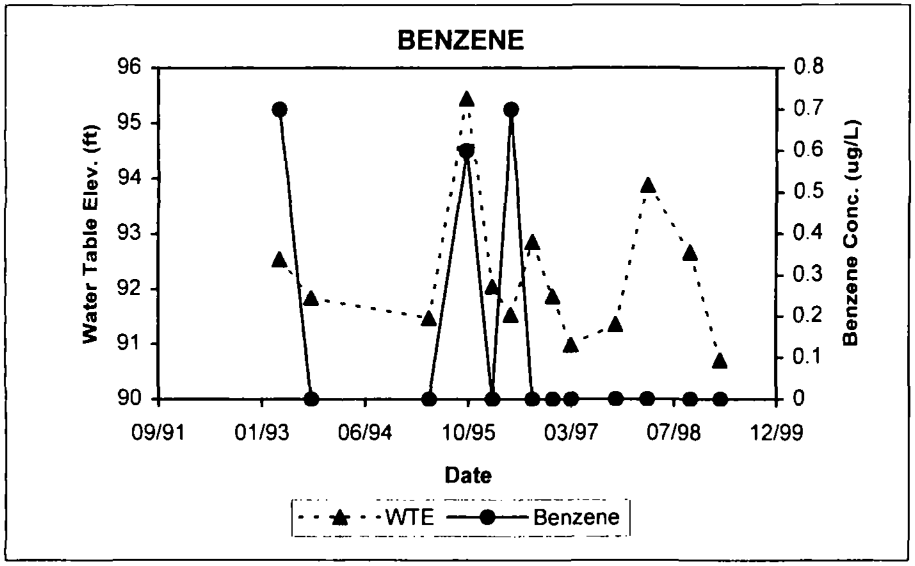
No Xylenes Detected

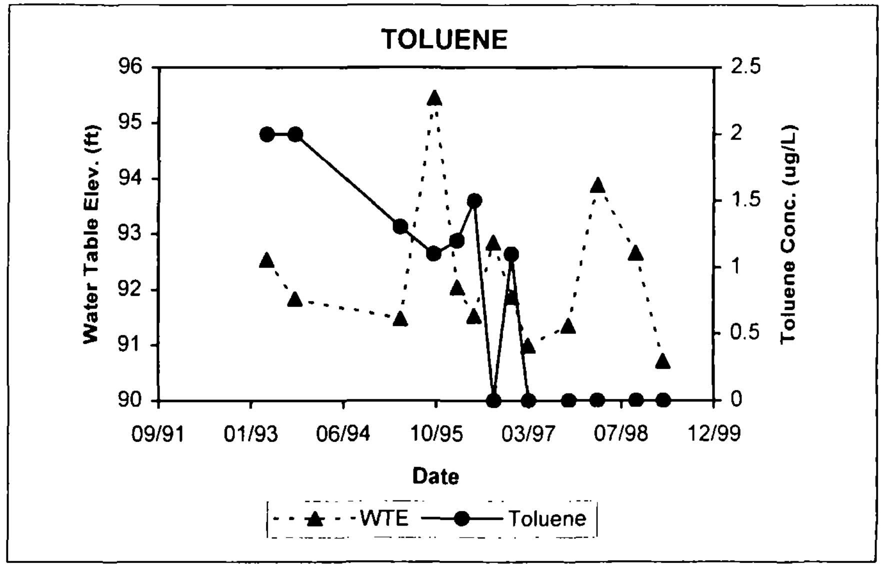
No g-BHC Detected

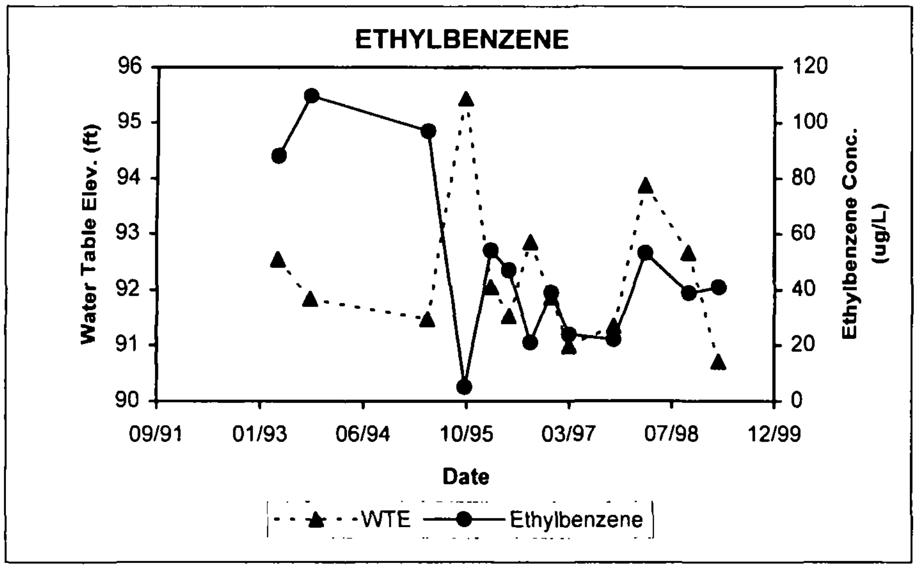
No Chlordane Detected

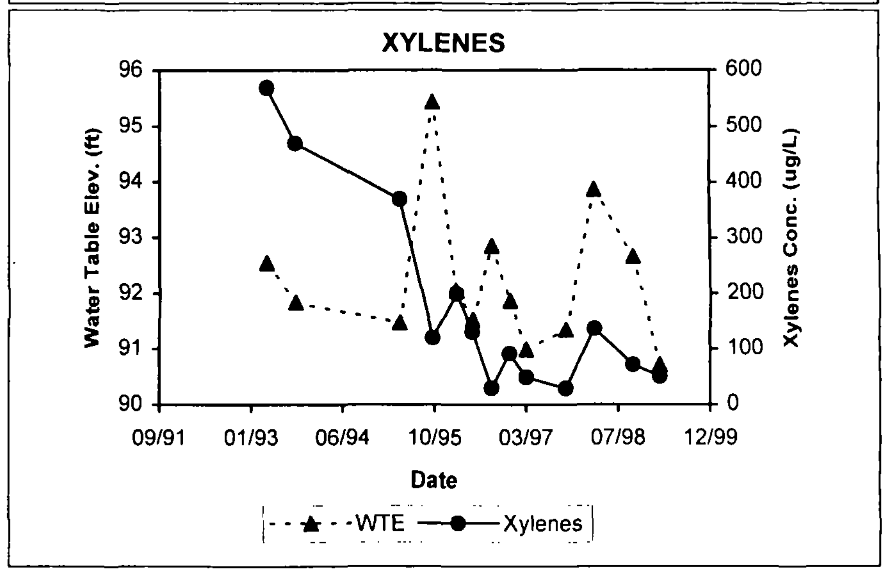
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-2D



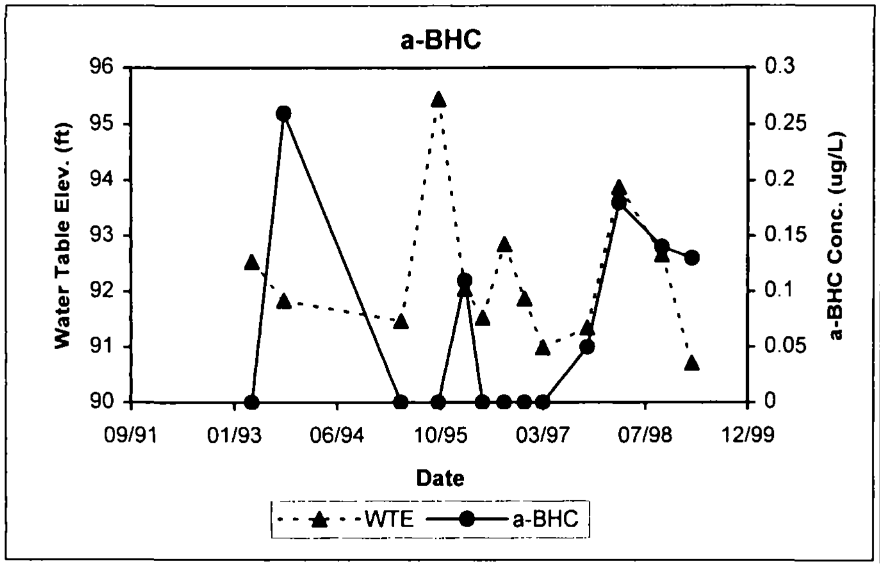


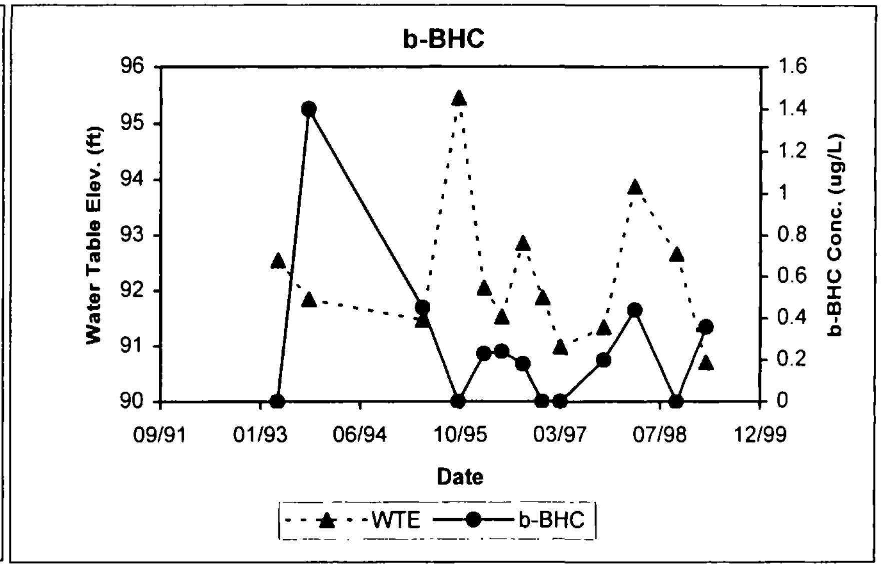


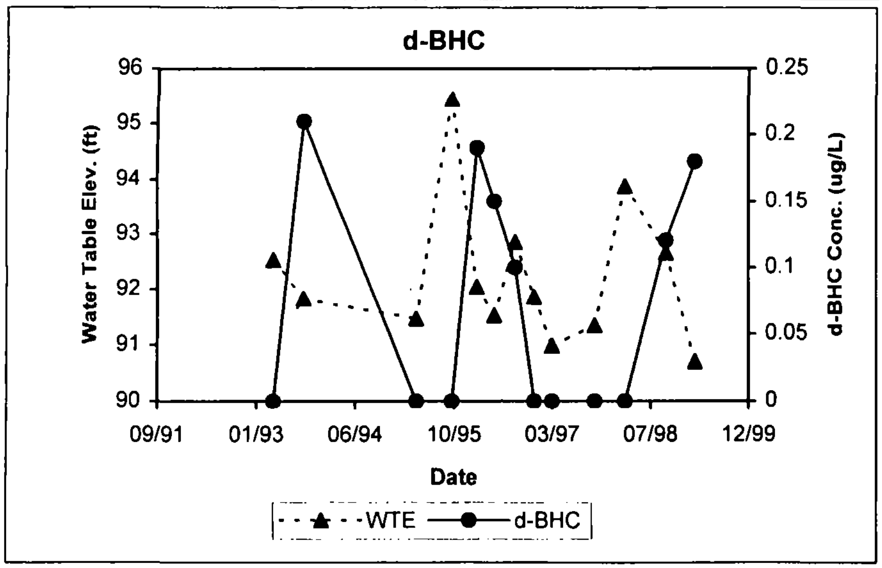


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-2D





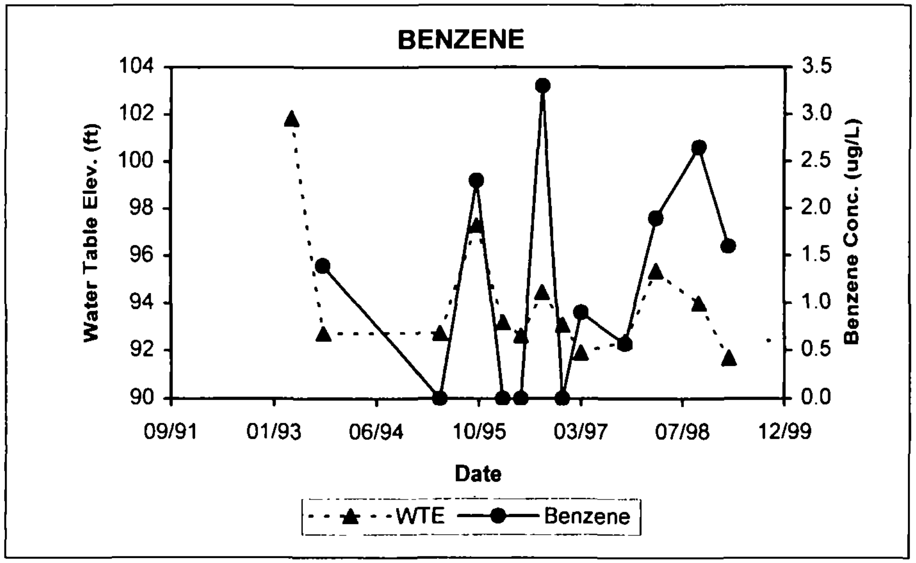


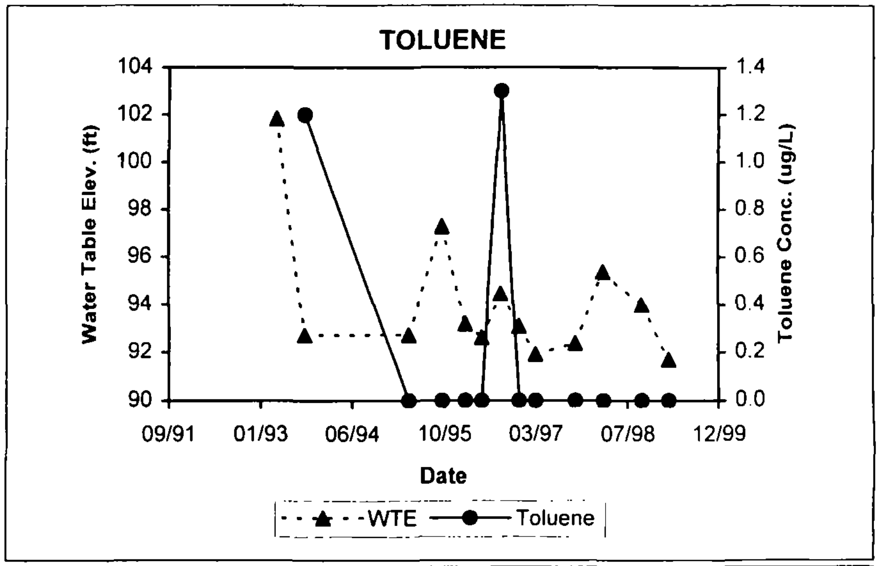
No g-BHC Detected

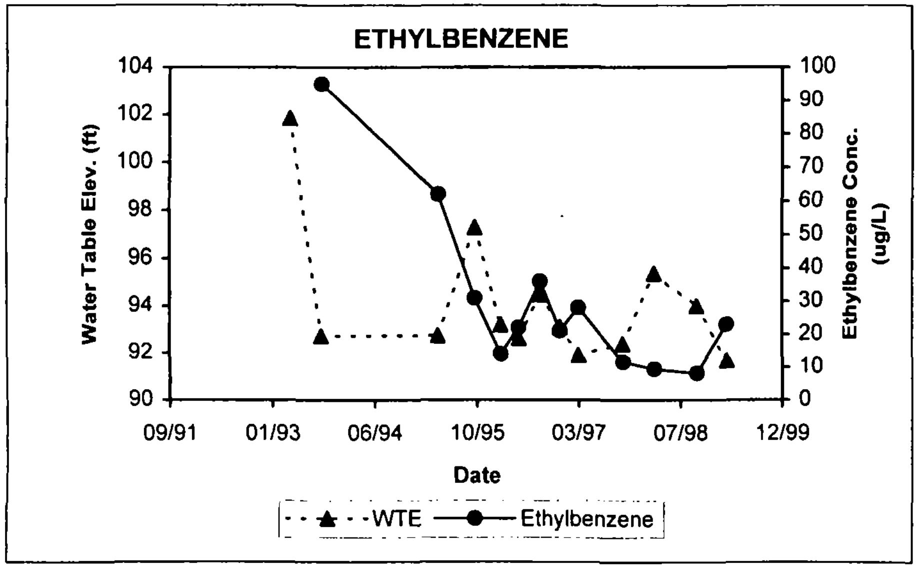
No Chordane Detected

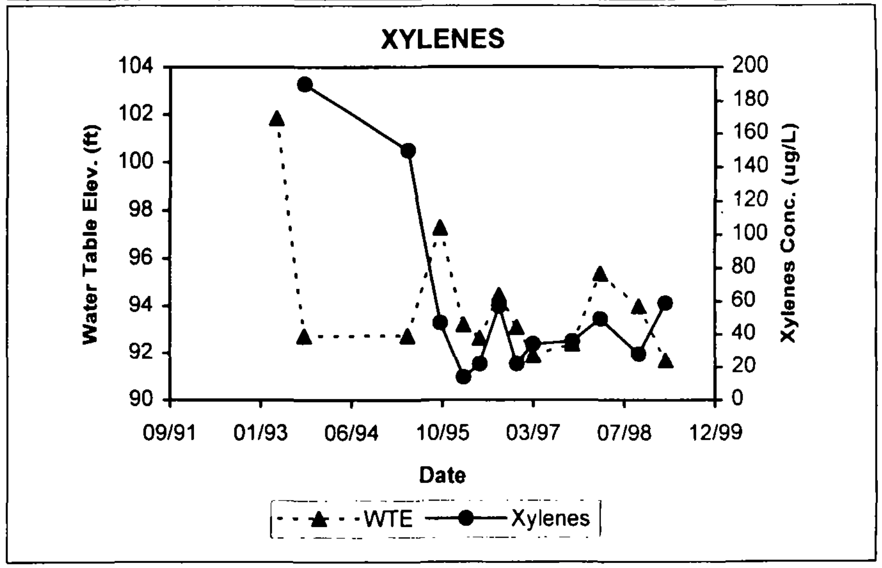
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-3S



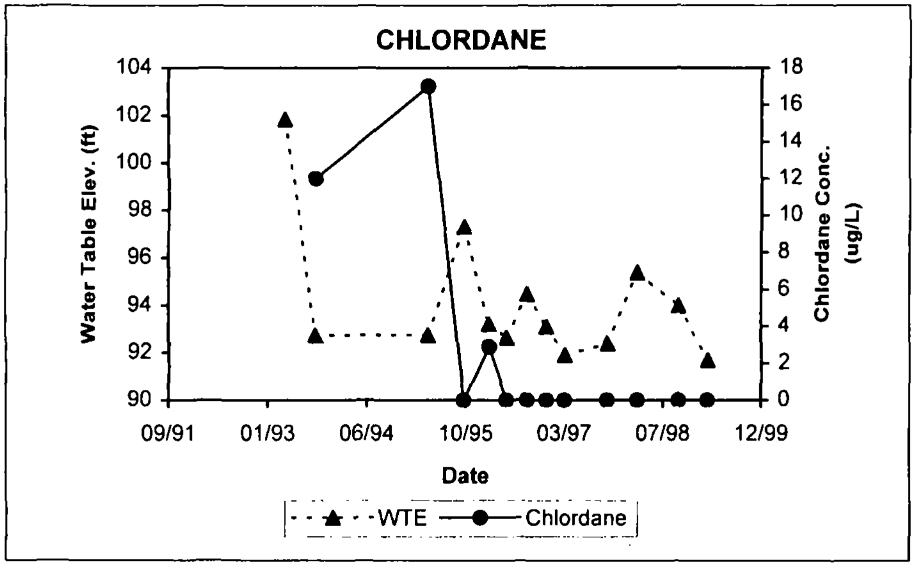






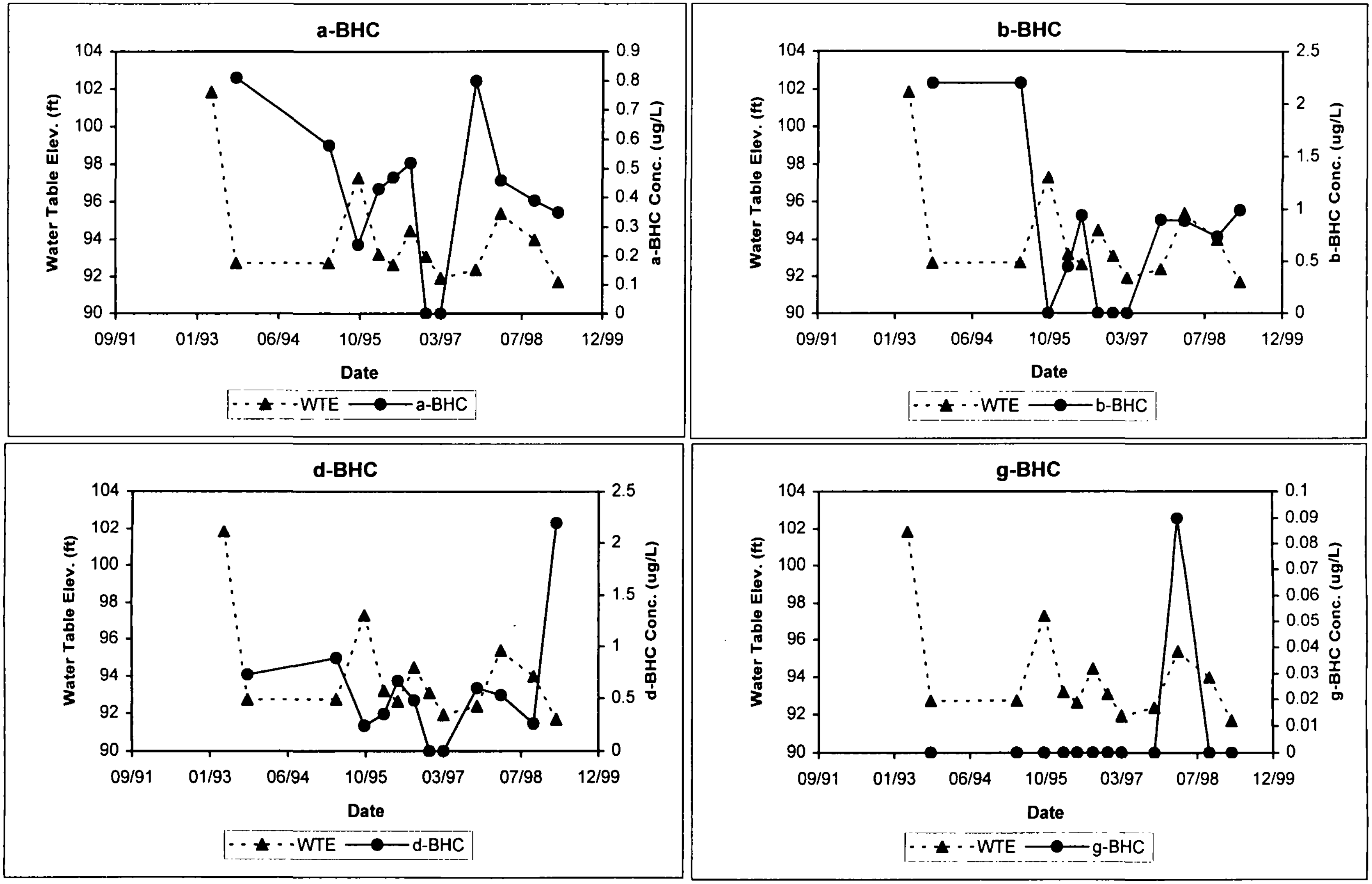
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-3S



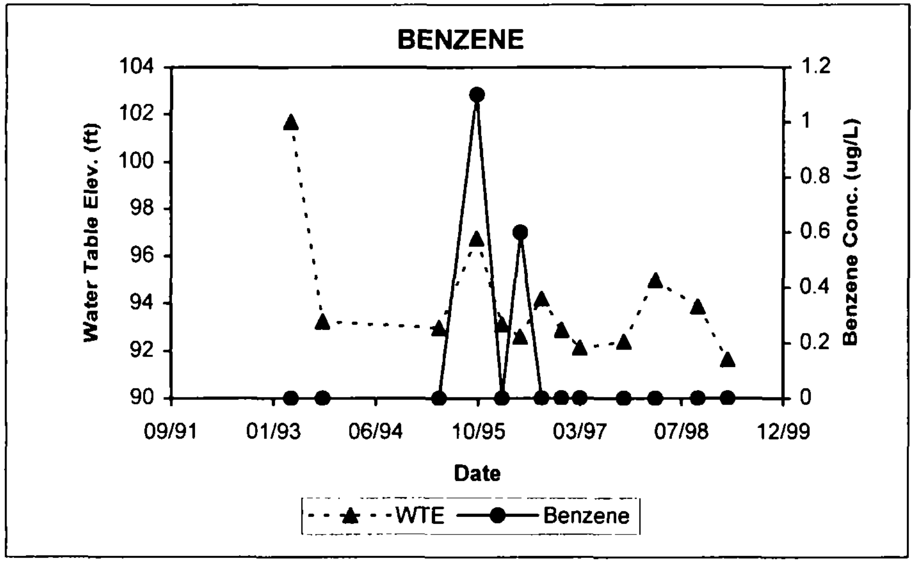
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-3S

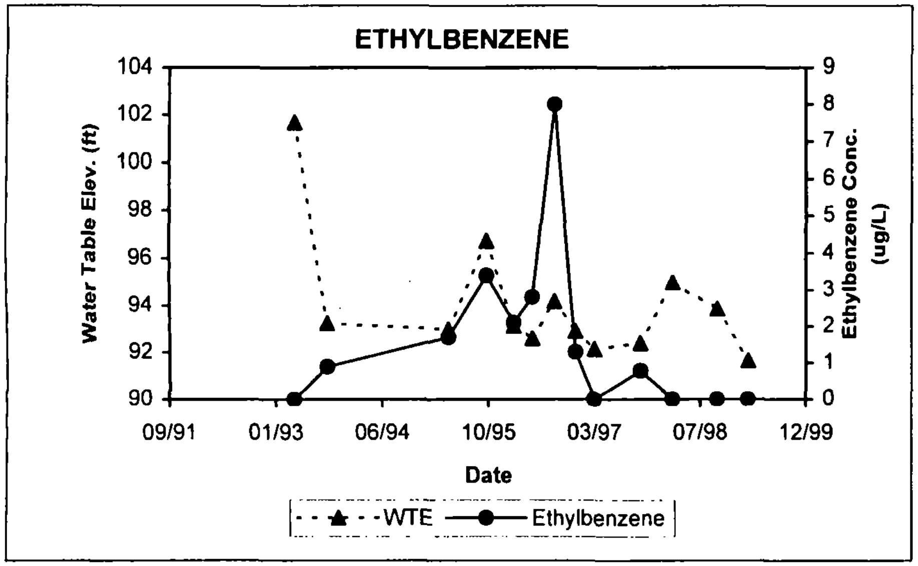


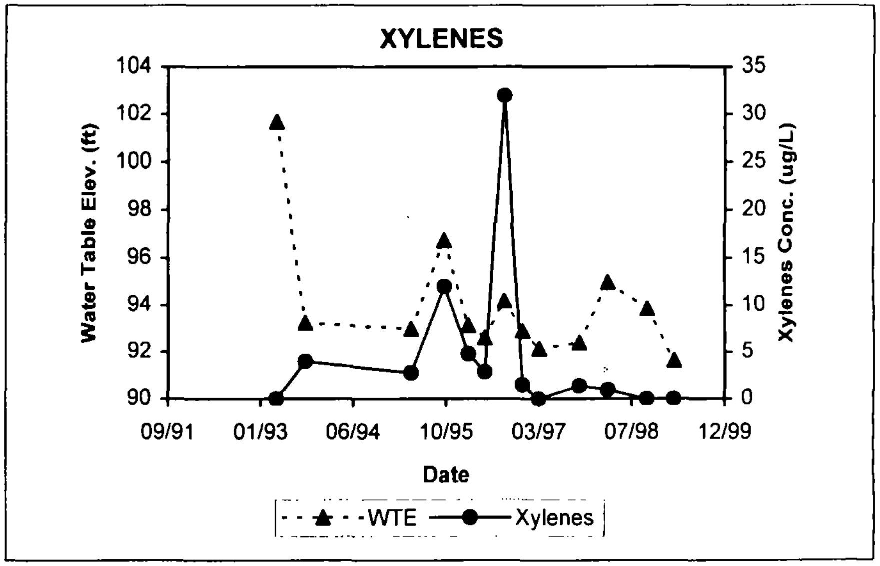
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-3D



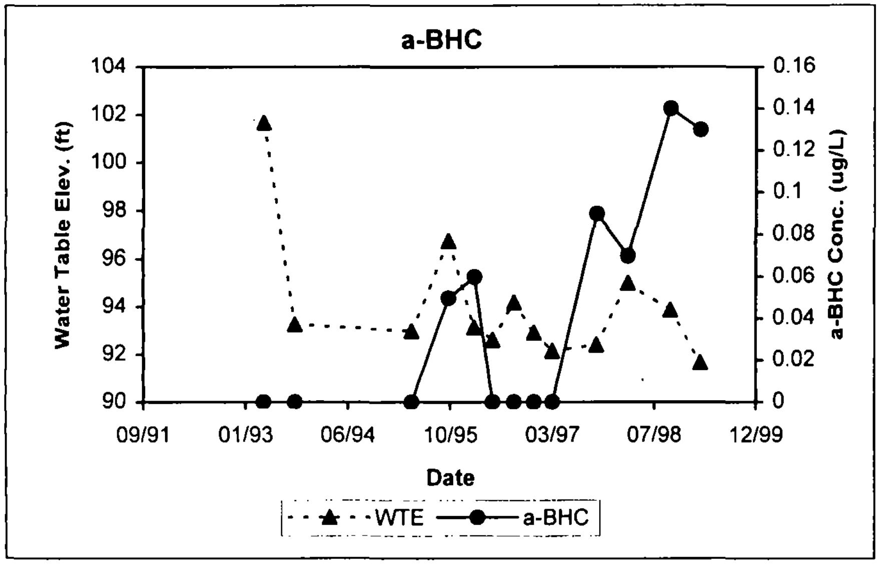
No Toluene Detected

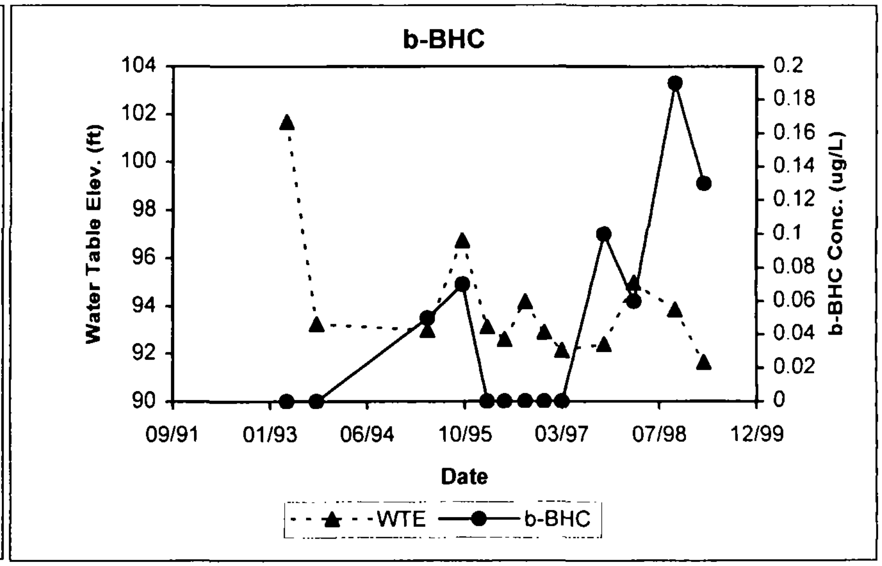


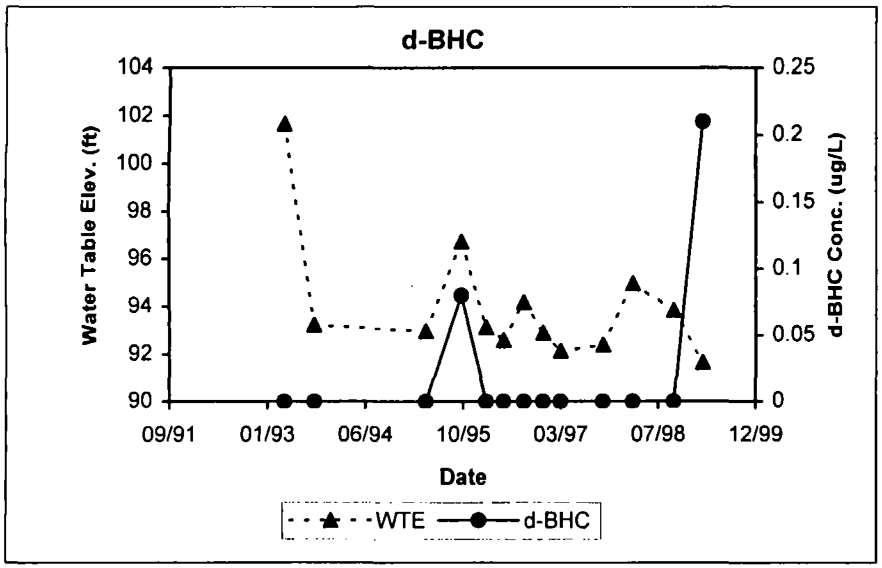


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-3D





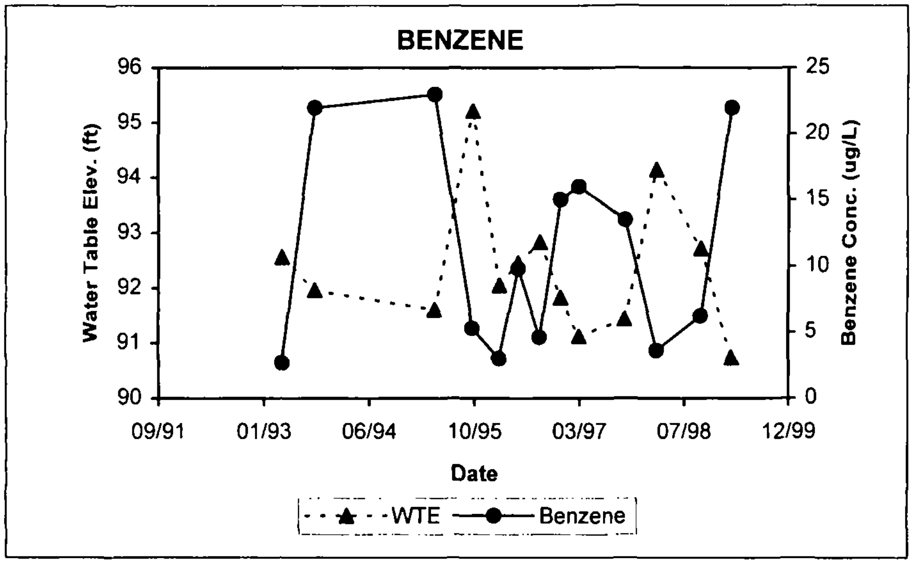


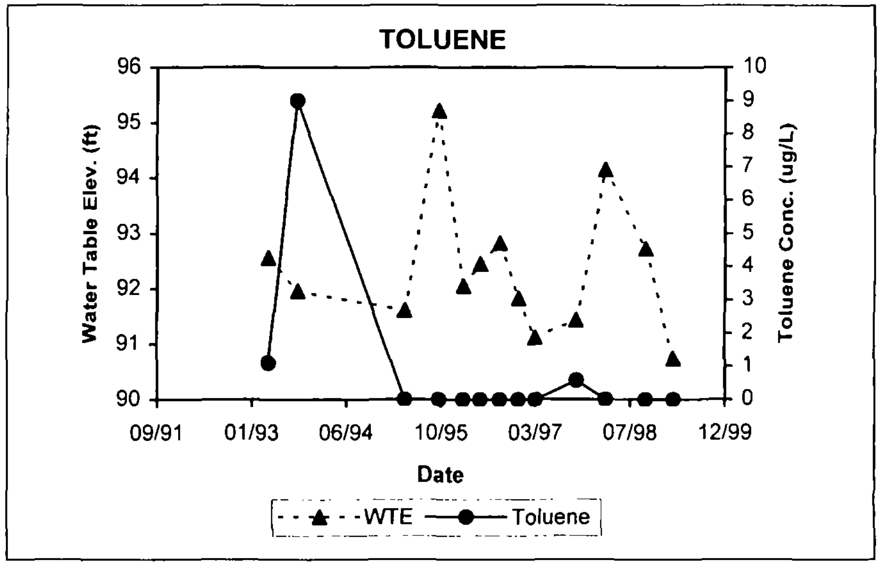
No g-BHC Detected

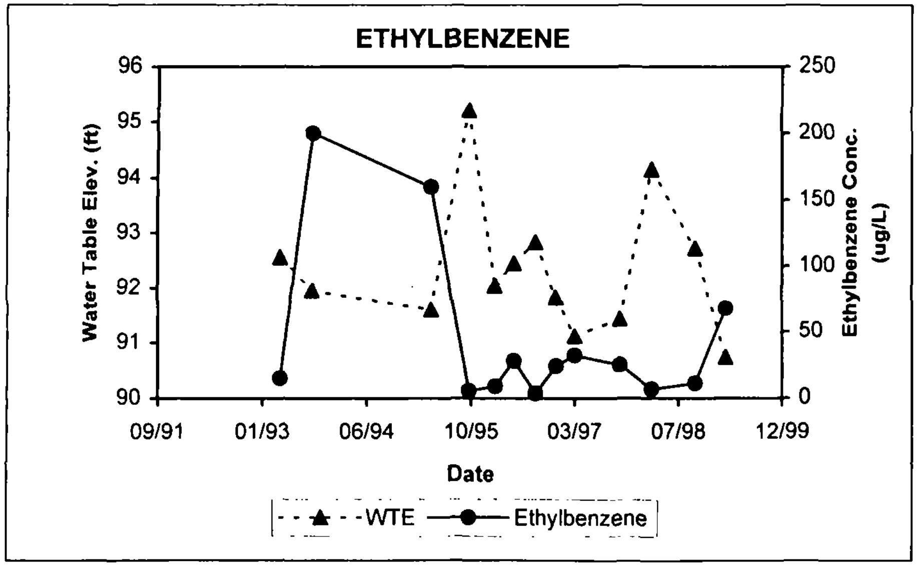
No Chlordane Detected

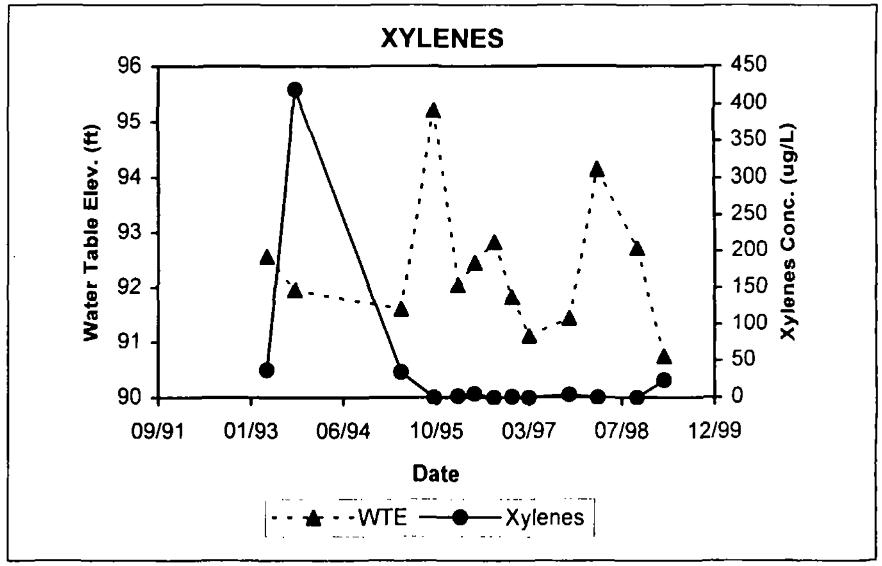
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-4S



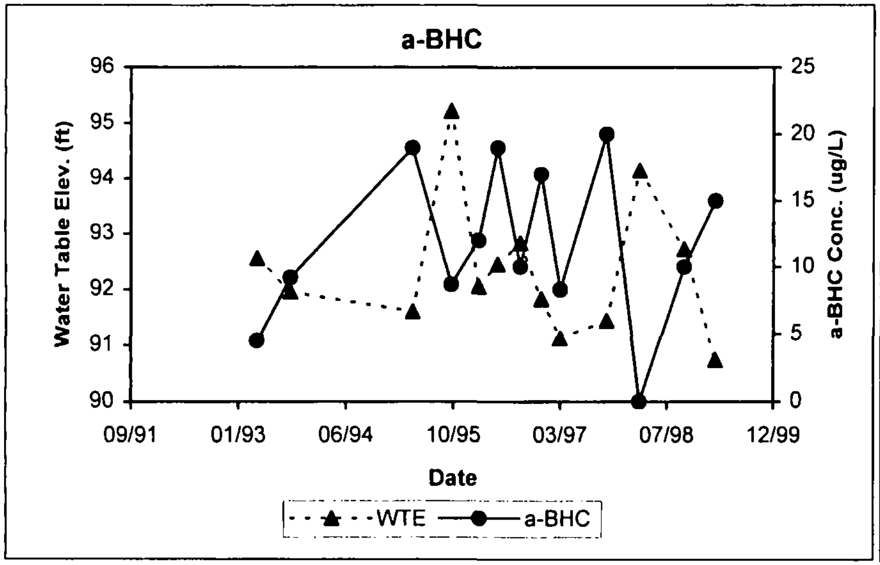


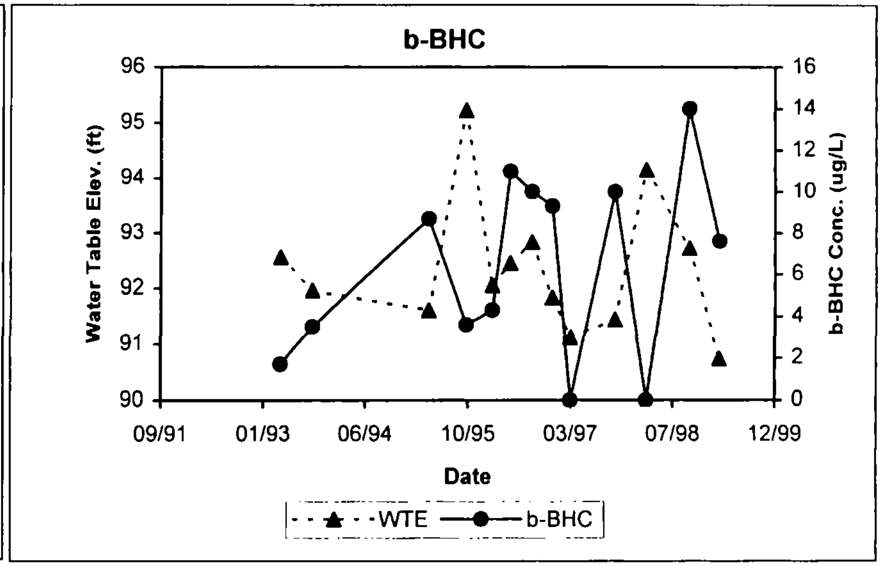


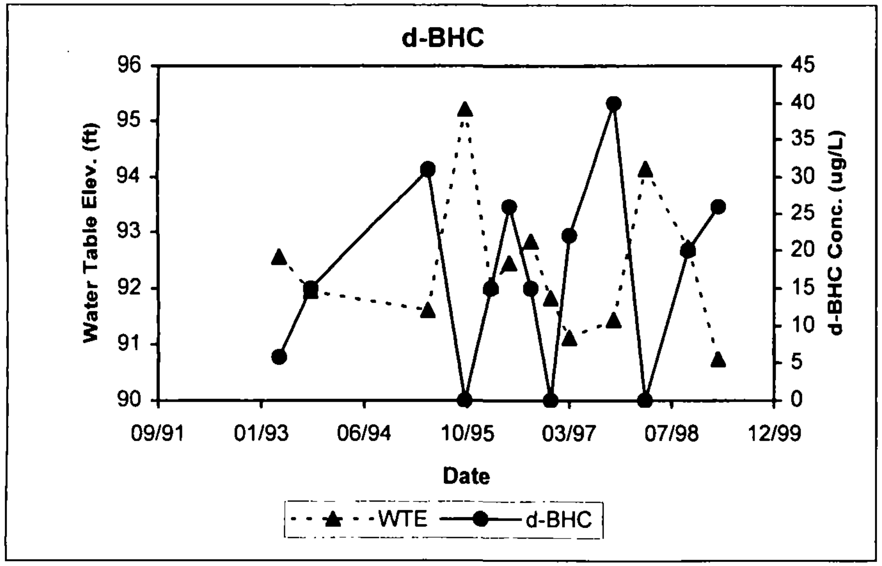


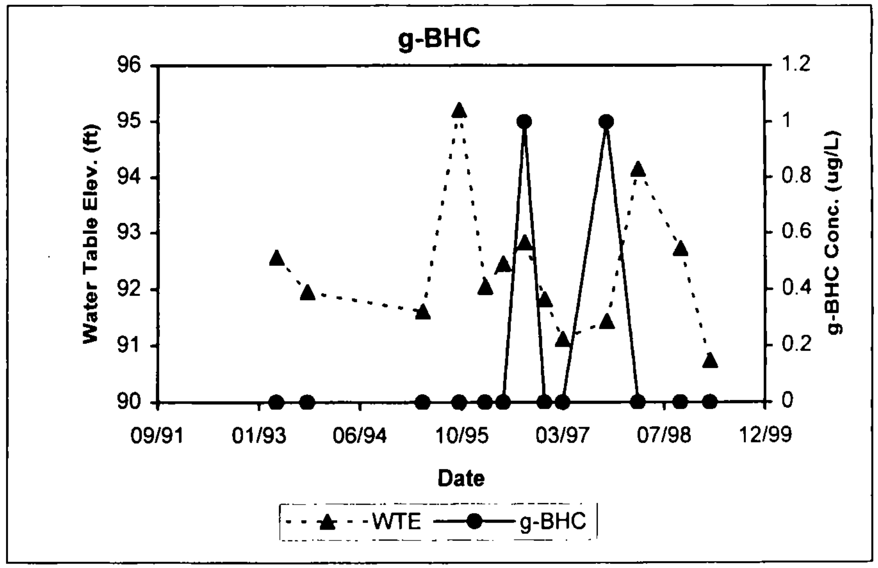
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-4S



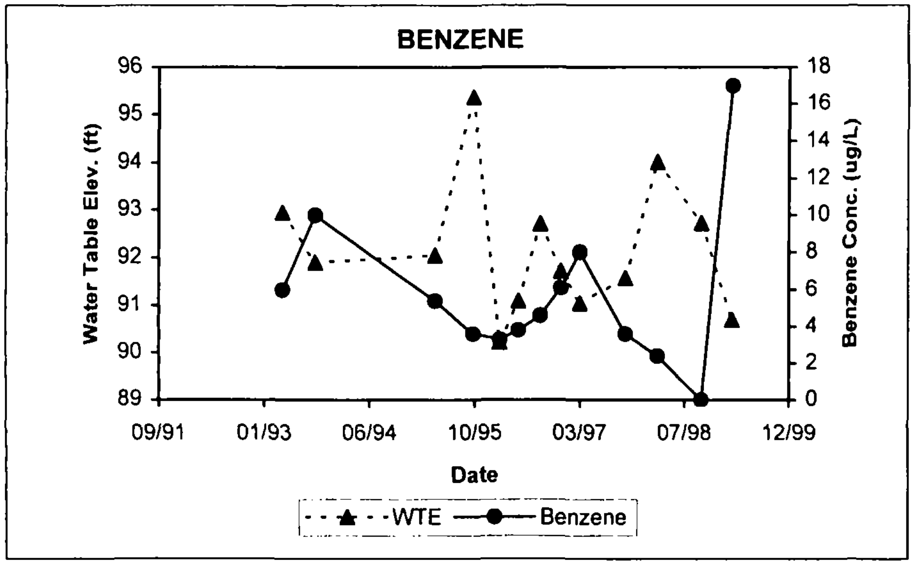


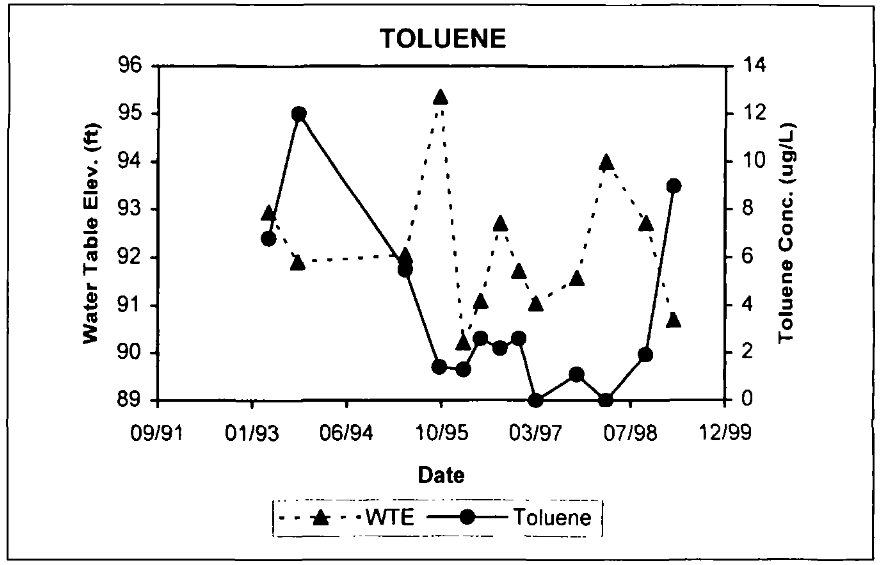


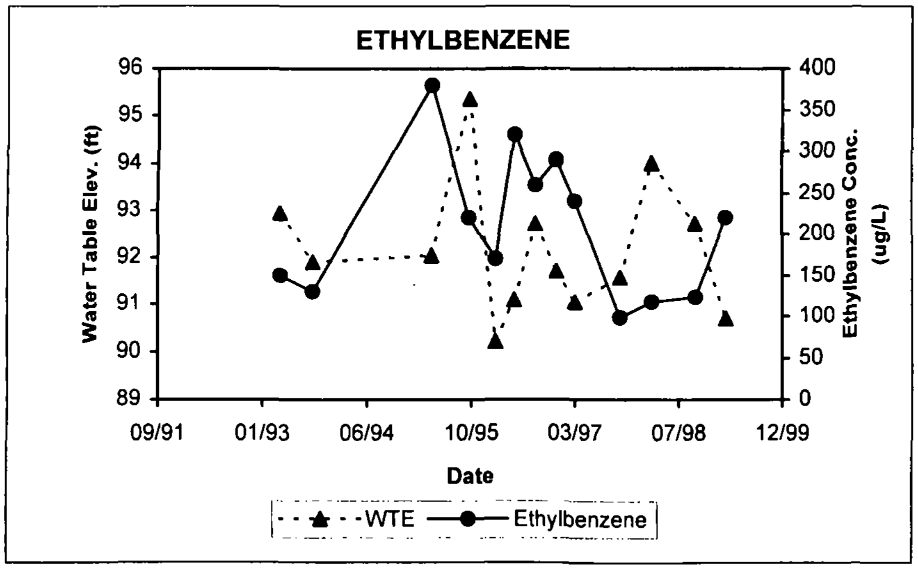


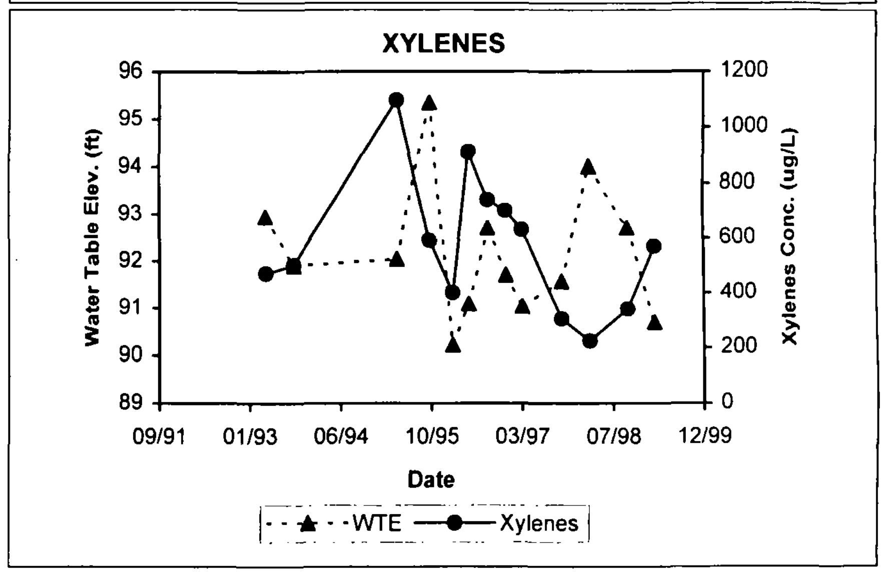
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-4D



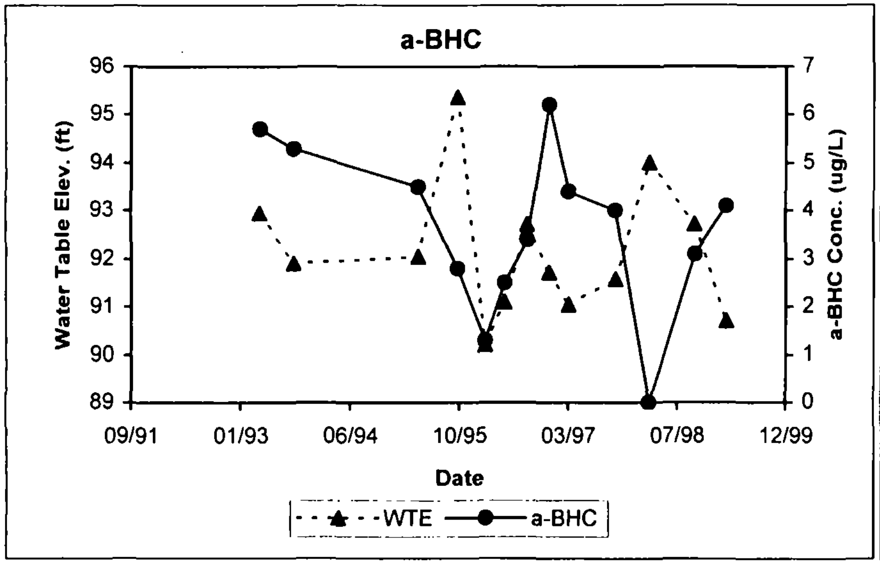


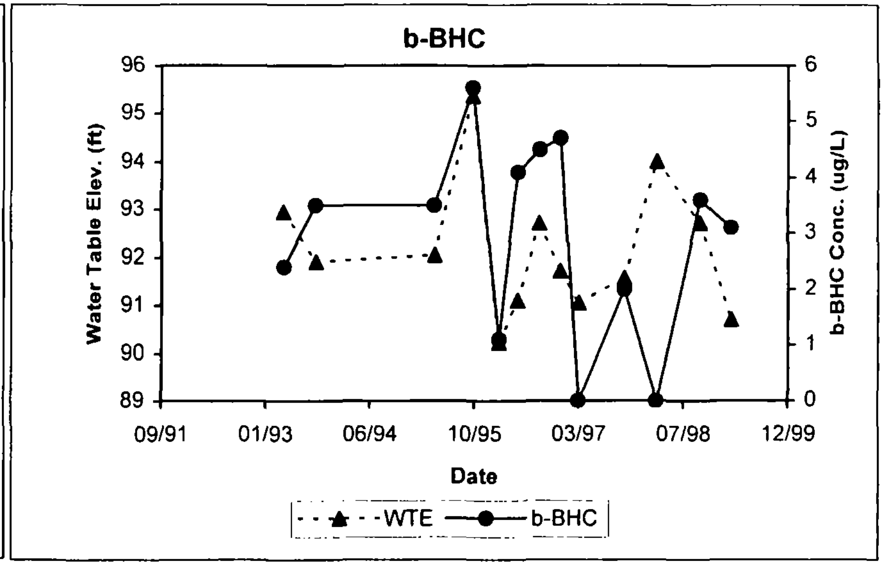


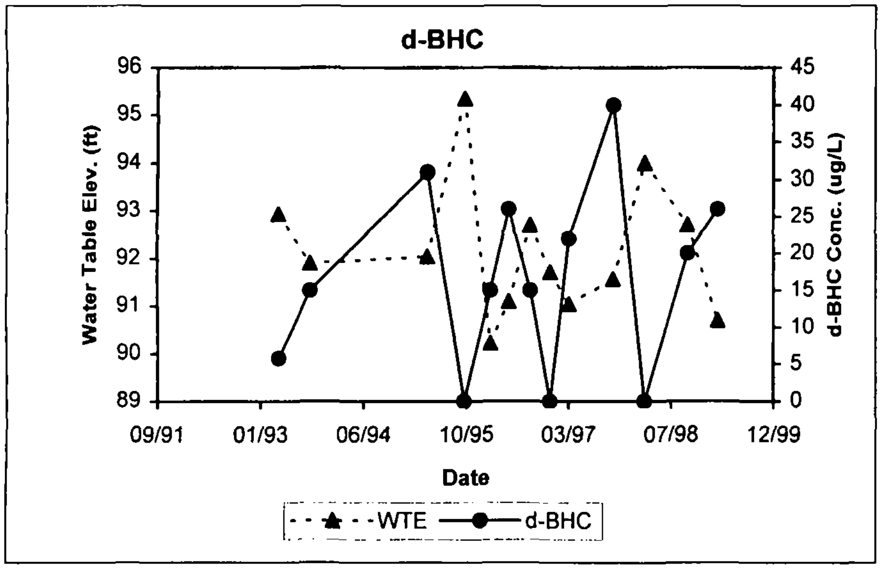


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-4D







No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-5S

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

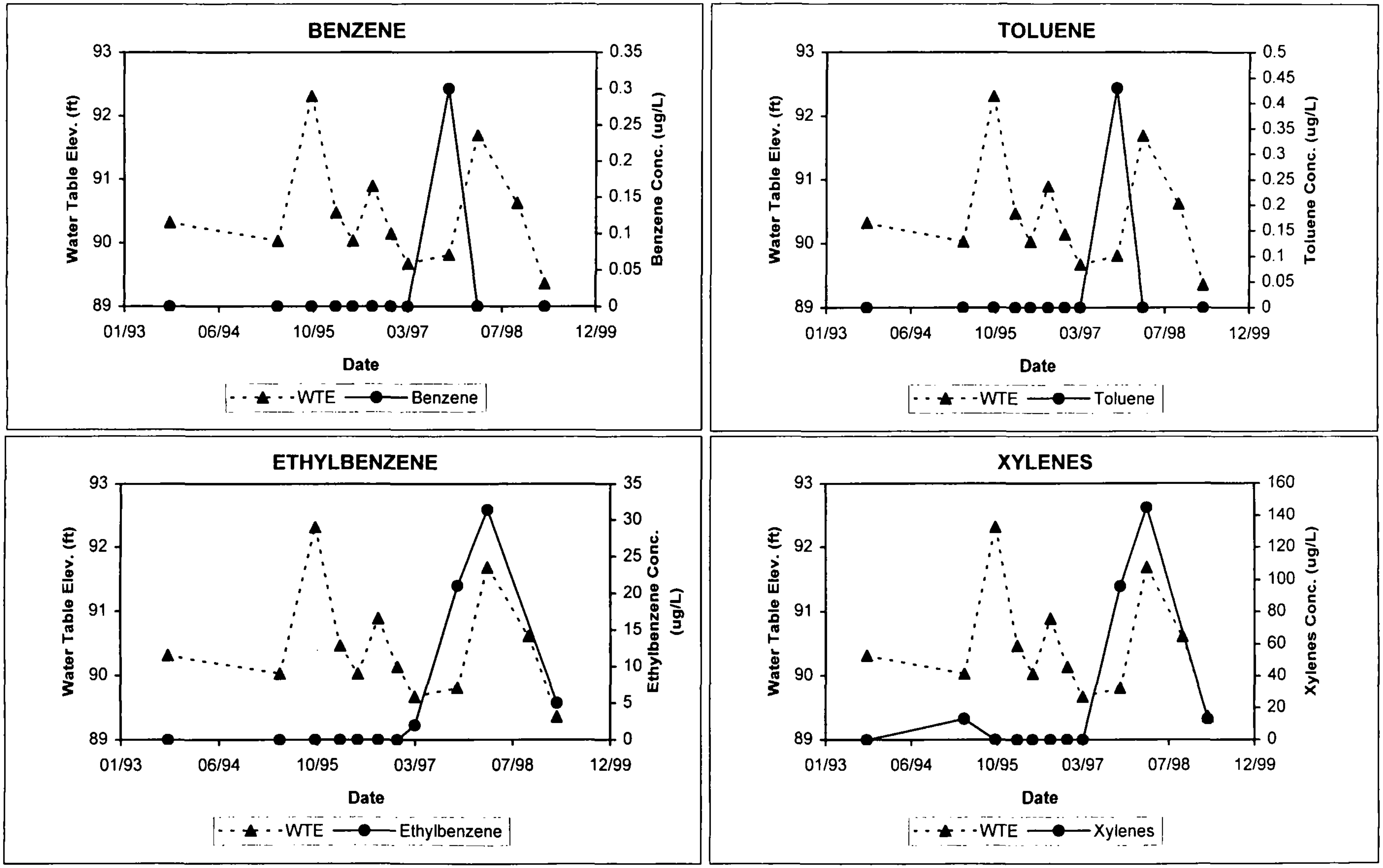
No d-BHC Detected

No g-BHC Detected

No Chlordane Detected

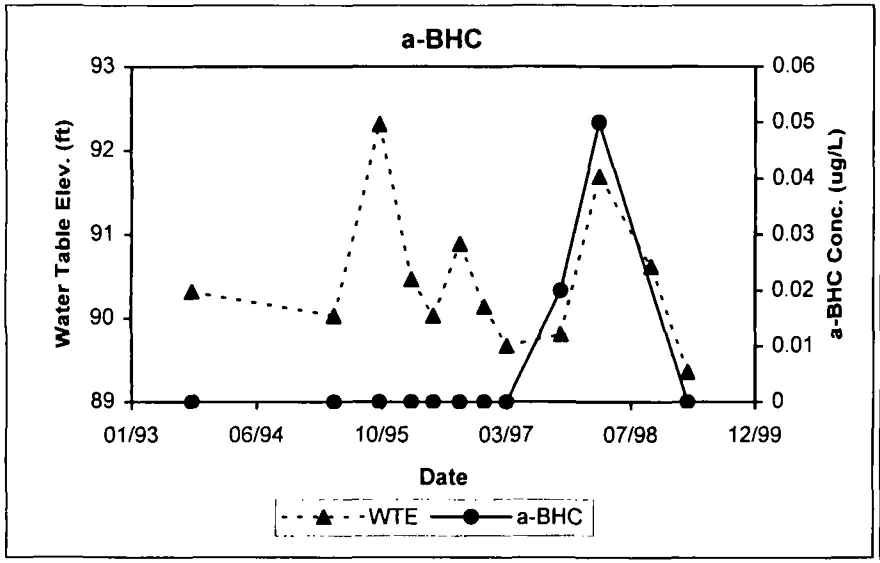
Data through 3/99

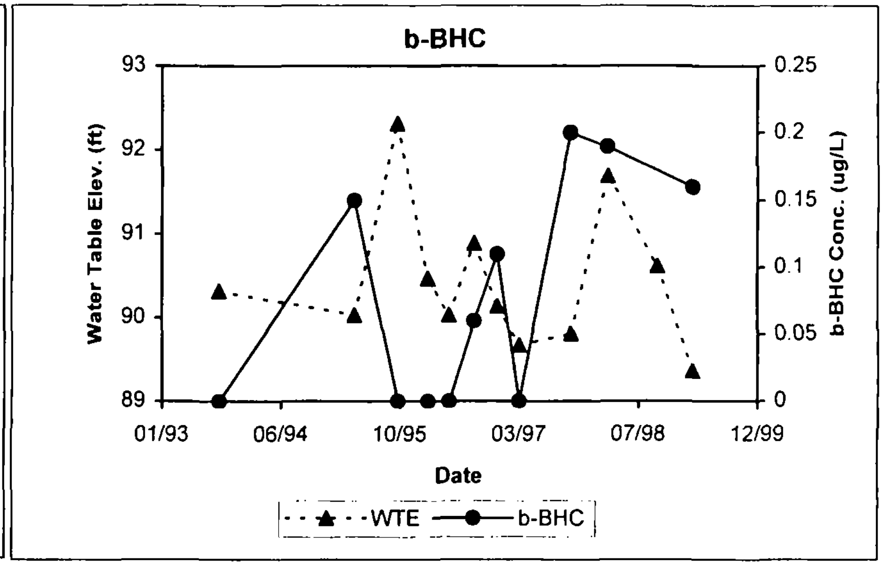
ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-5D

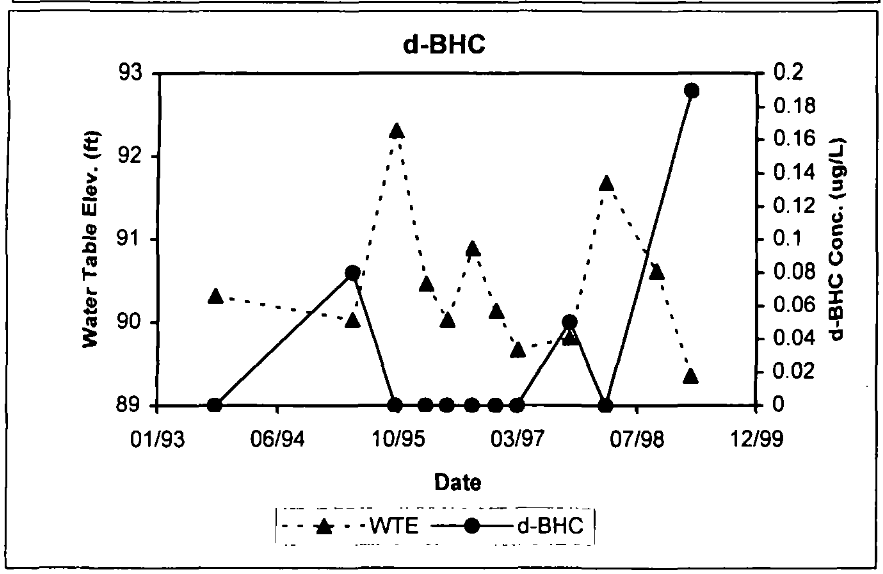


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-5D





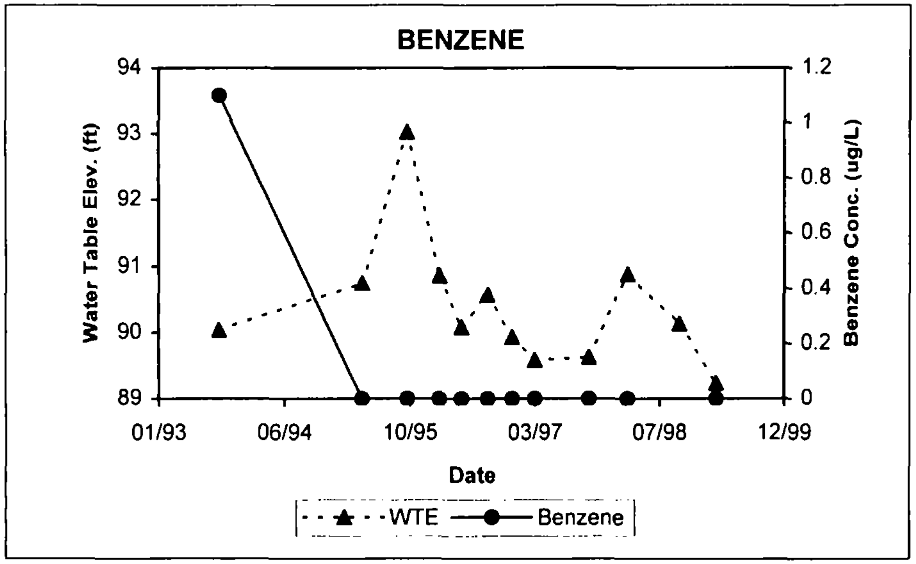


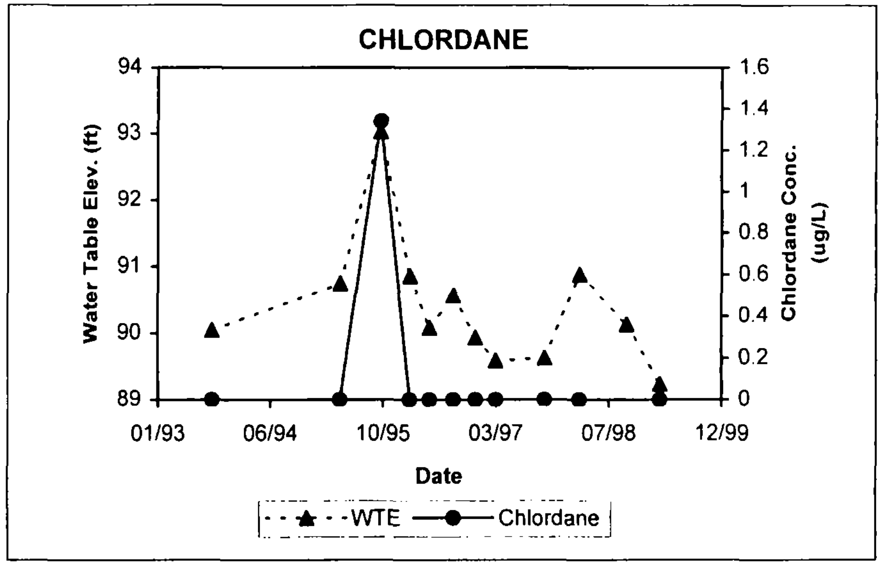
No g-BHC Detected

No Chordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-6S





No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

No d-BHC Detected

No g-BHC Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-6D

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

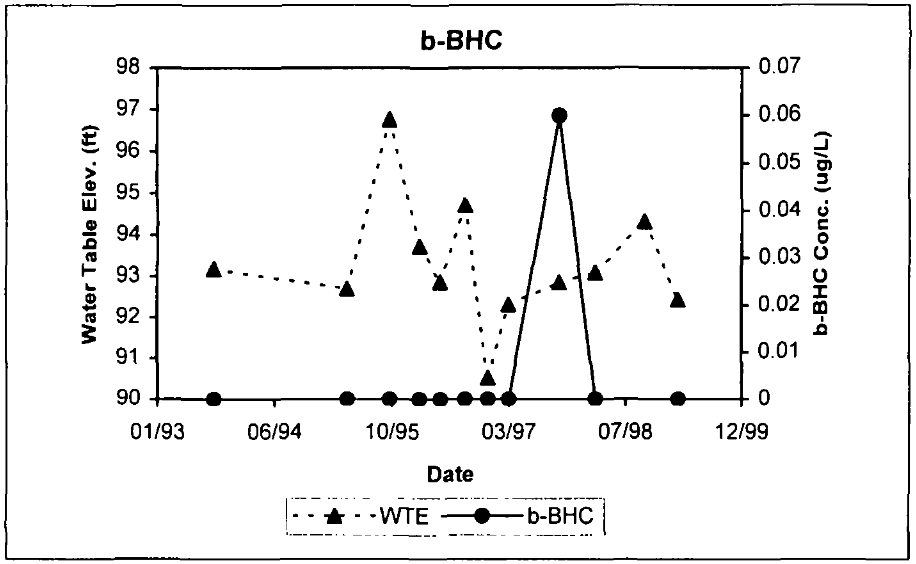
No d-BHC Detected

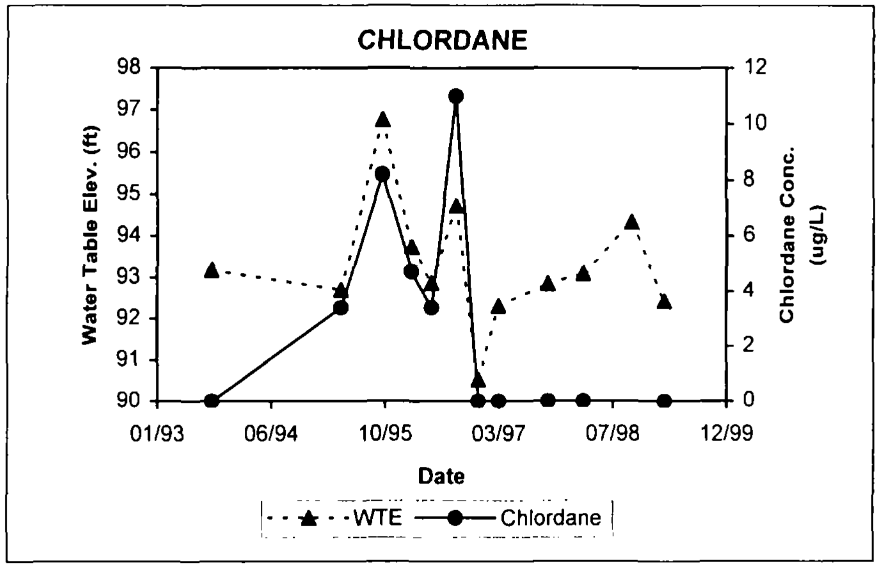
No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-7S





No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

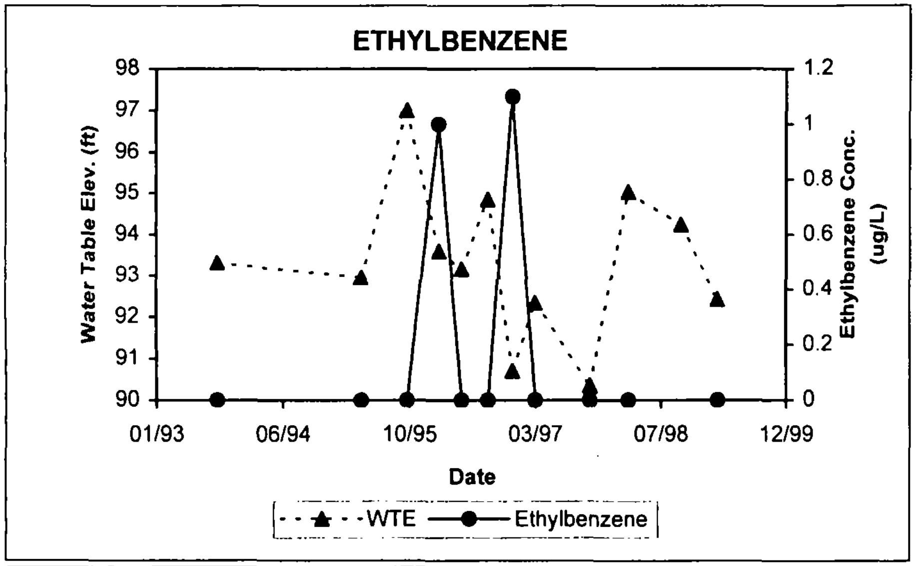
No a-BHC Detected

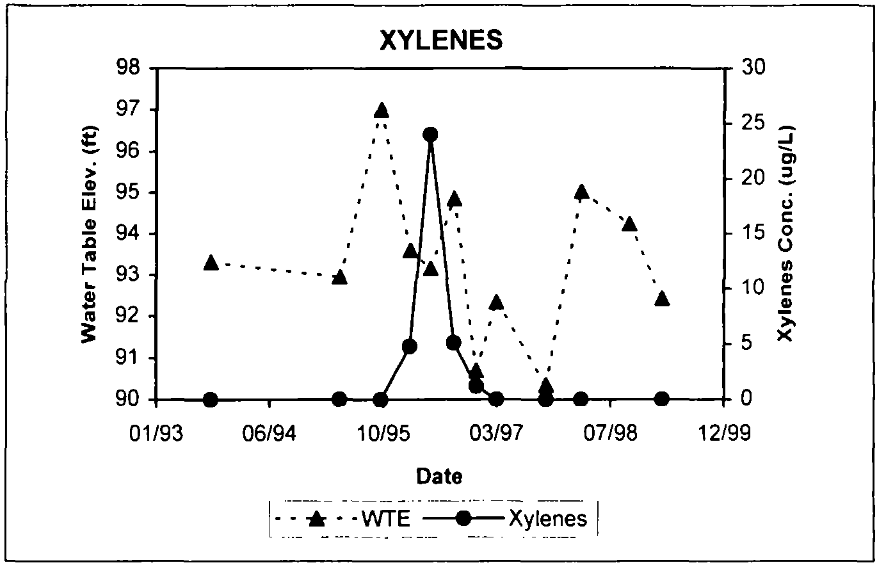
No d-BHC Detected

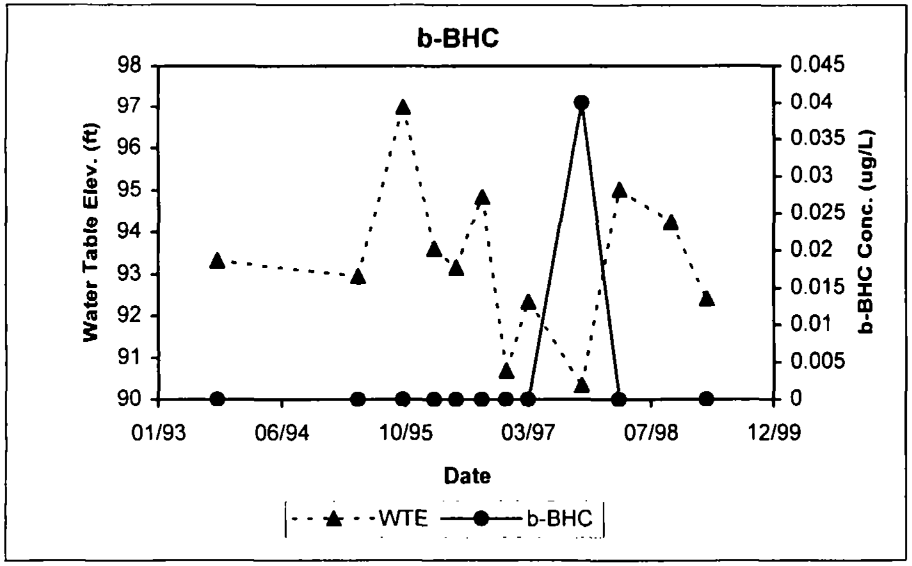
No g-BHC Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-7D







No Benzene Detected

No Toluene Detected

No a-BHC Detected

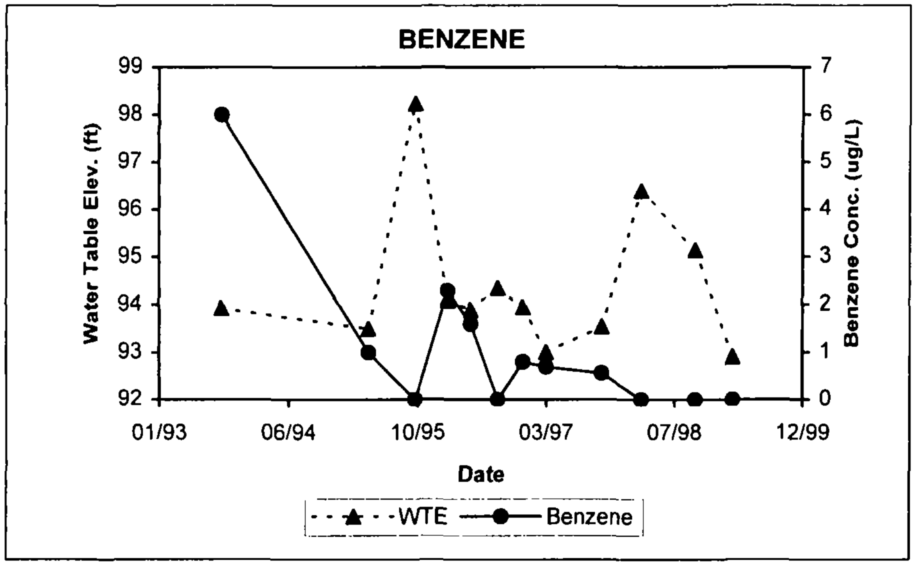
No d-BHC Detected

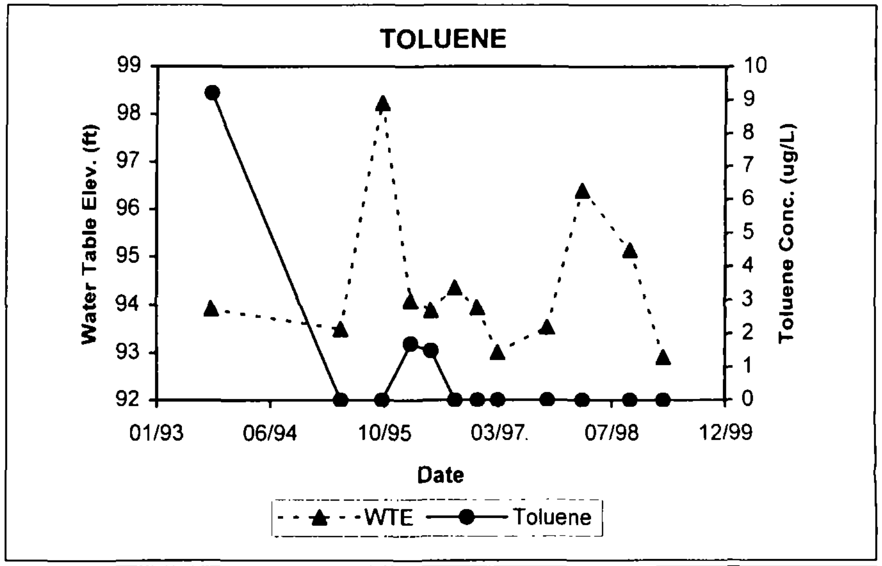
No g-BHC Detected

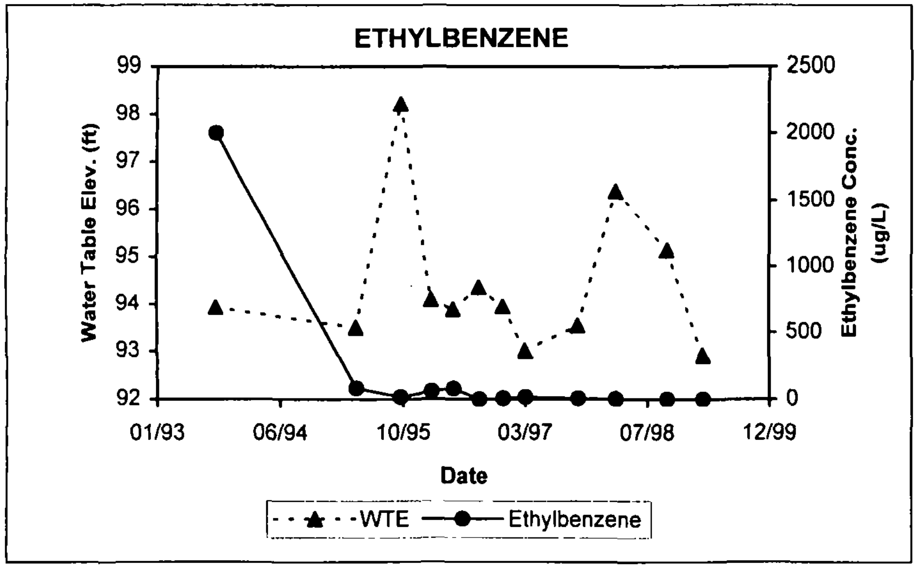
No Chlordane Detected

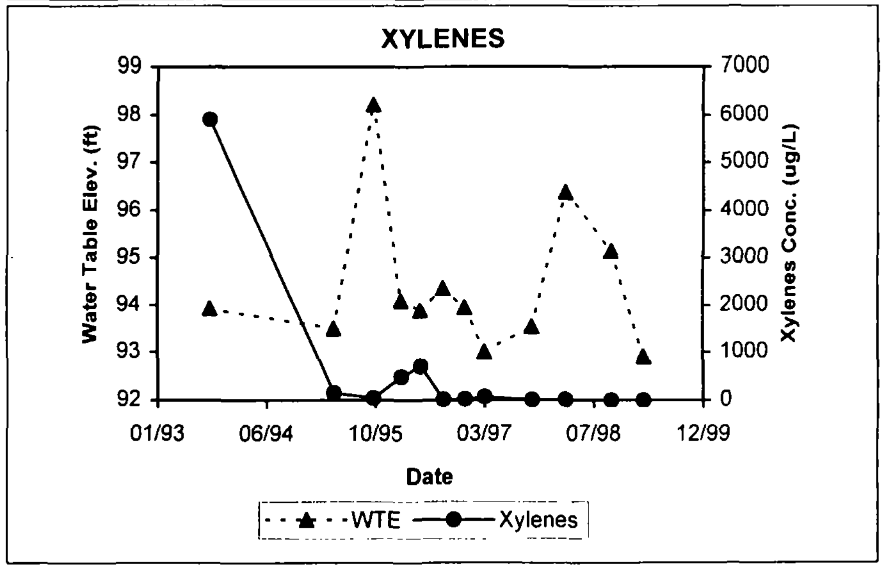
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-8S



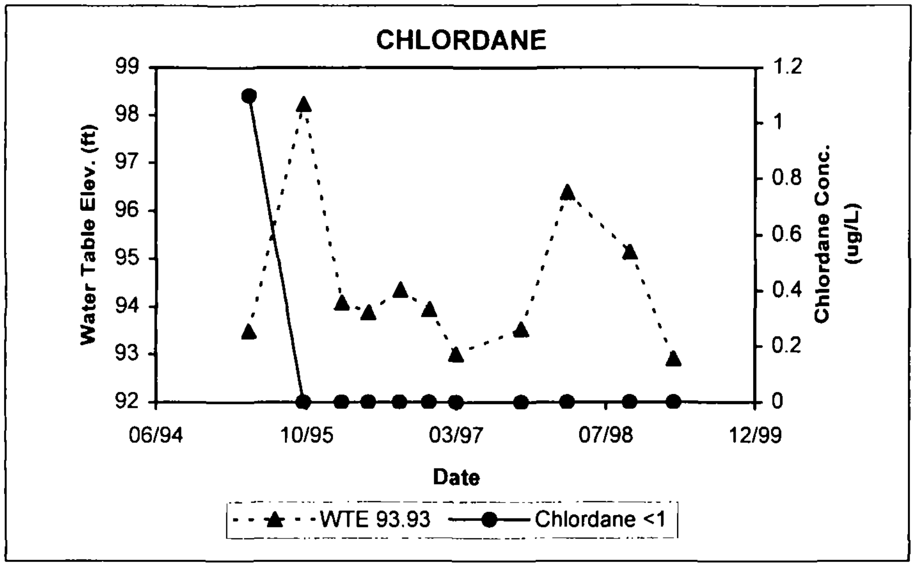






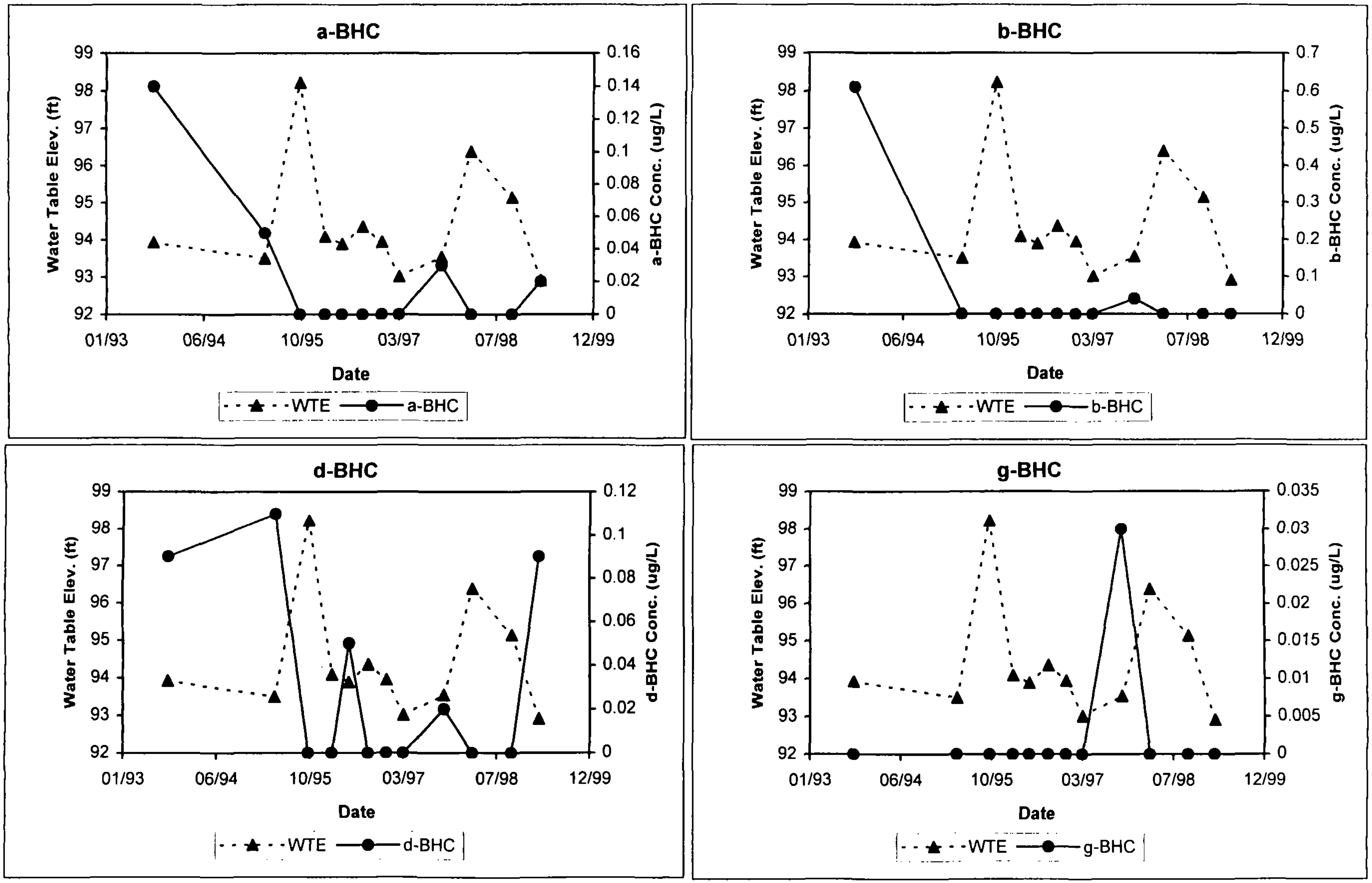
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-8S



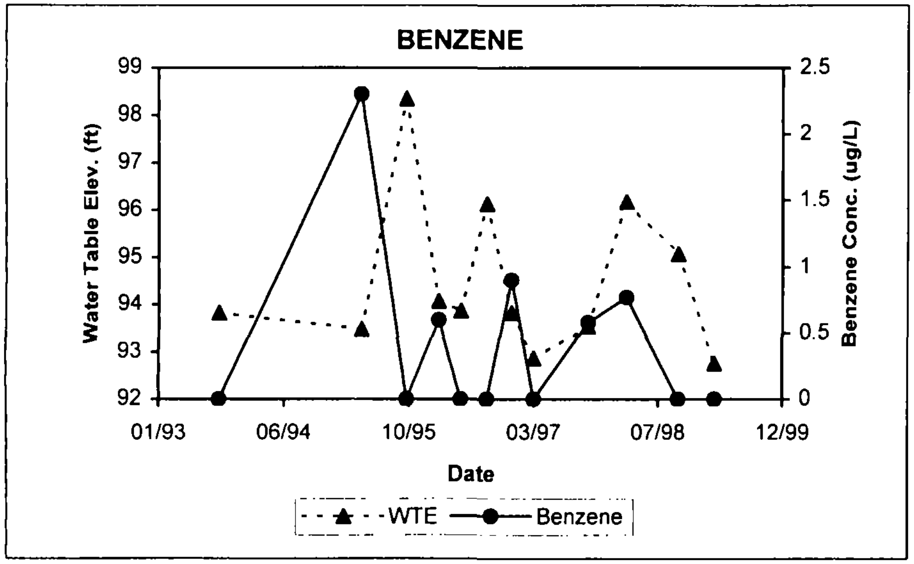
Data through 3/99

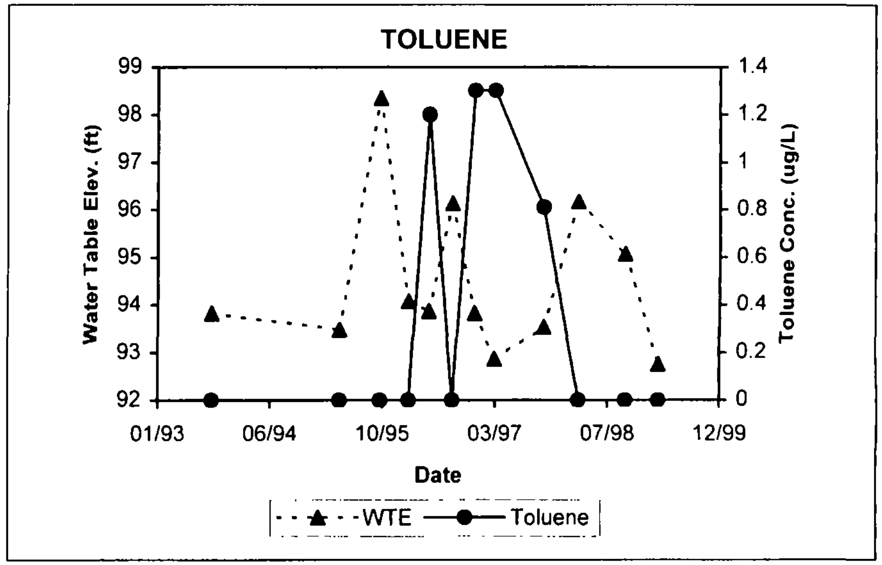
ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-8S

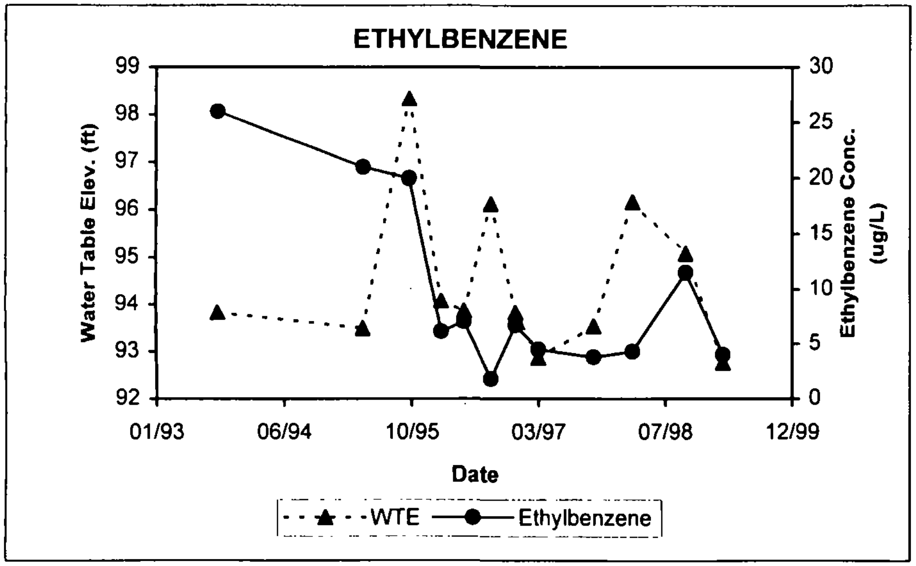


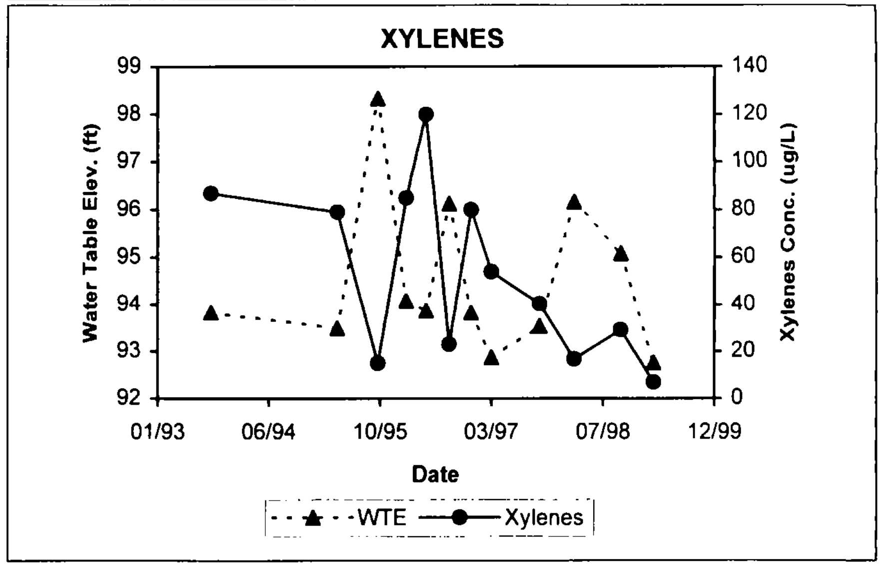
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-8D



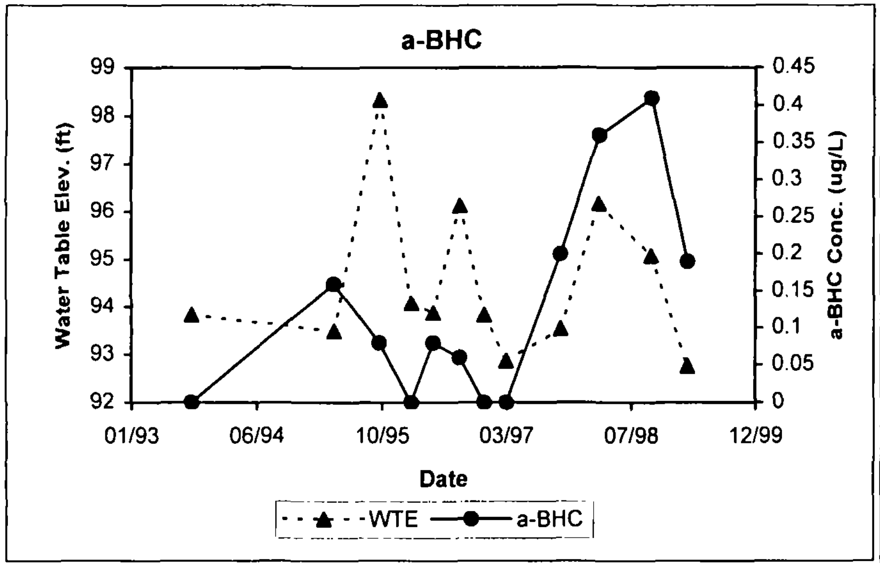


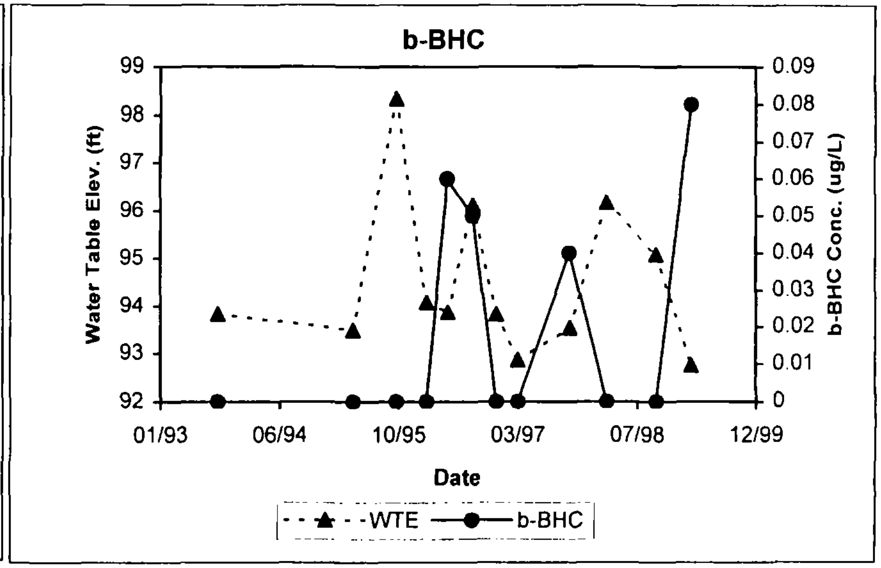


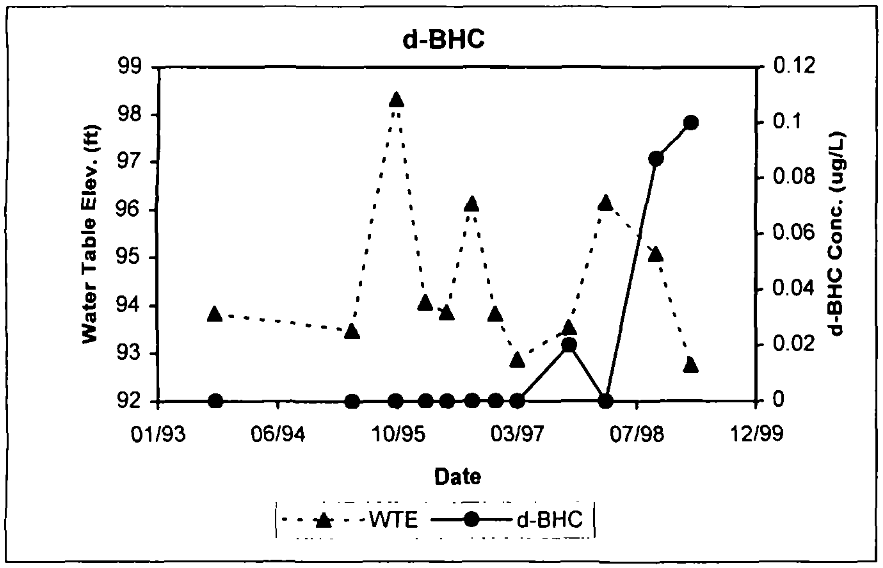


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-8D





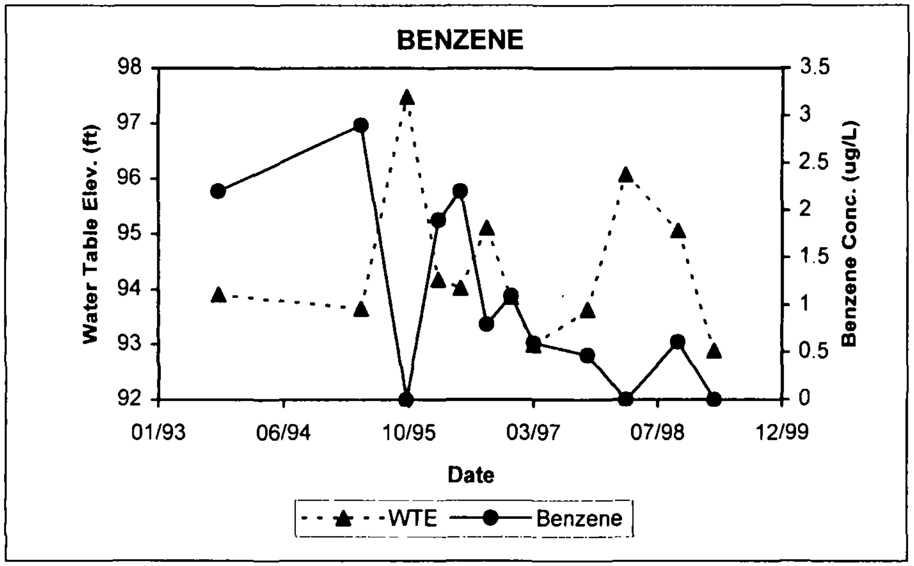


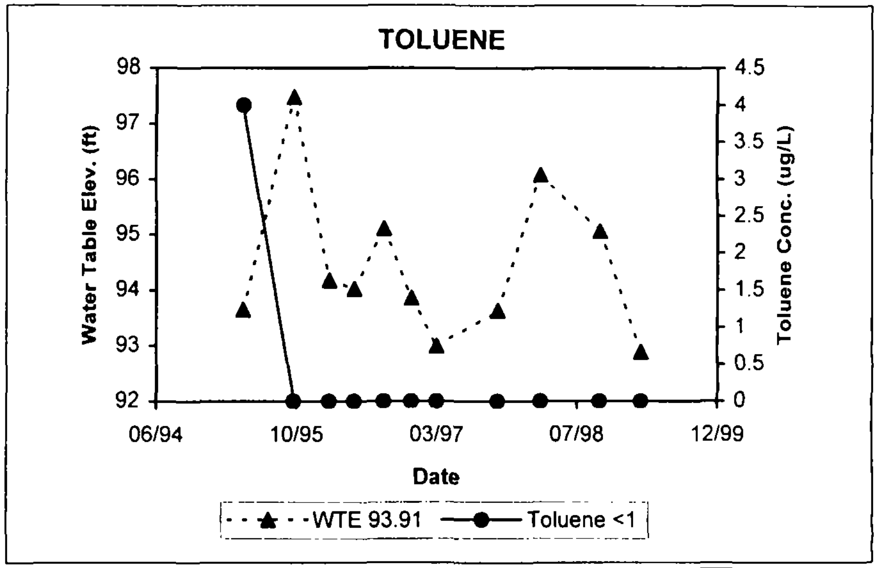
No g-BHC Detected

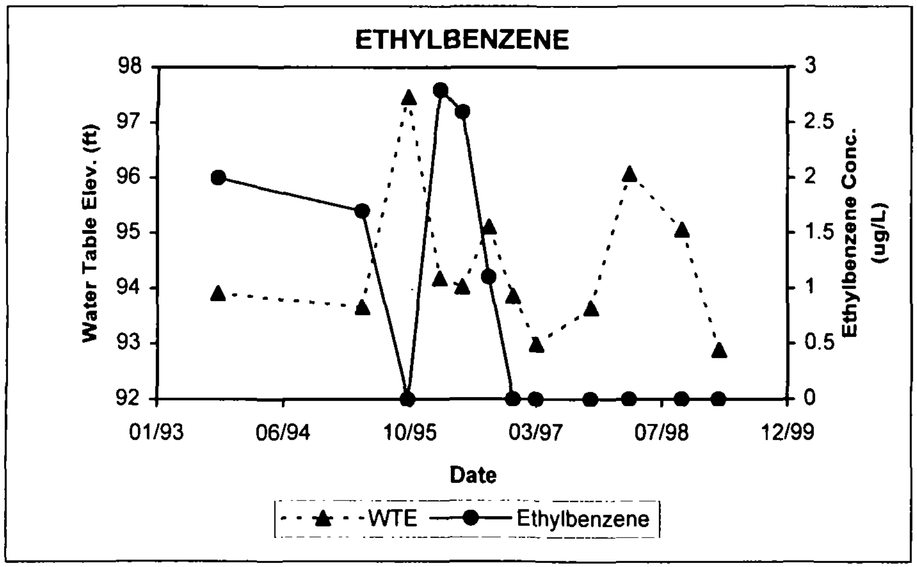
No Chlordane Detected

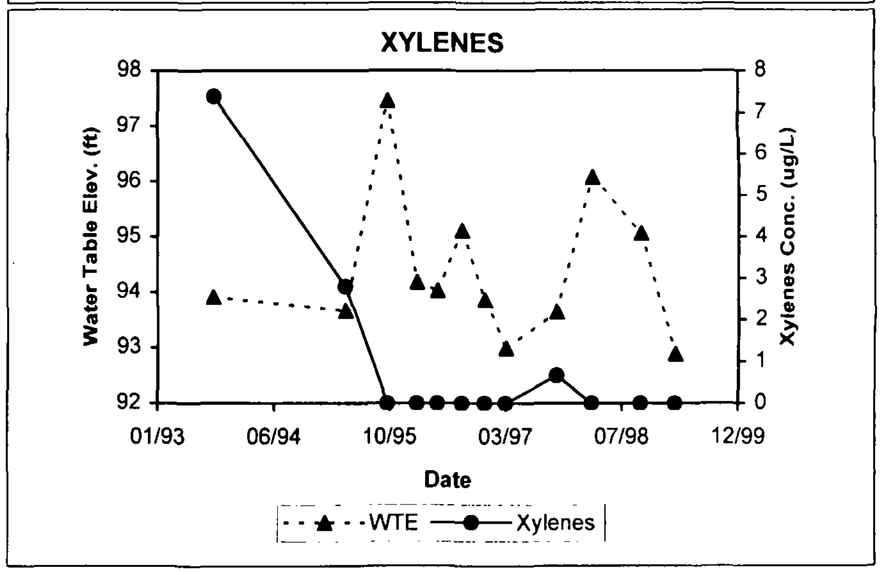
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-9D









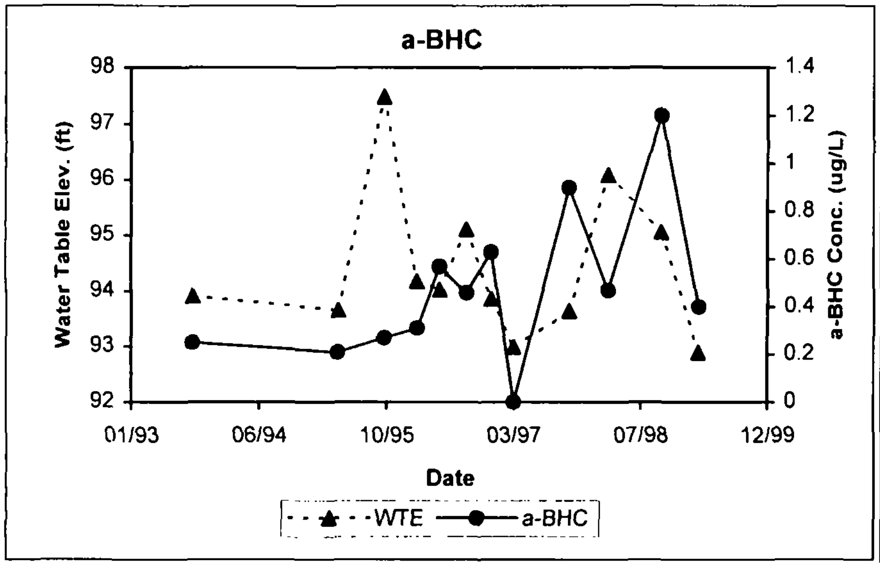
Data through 3/99

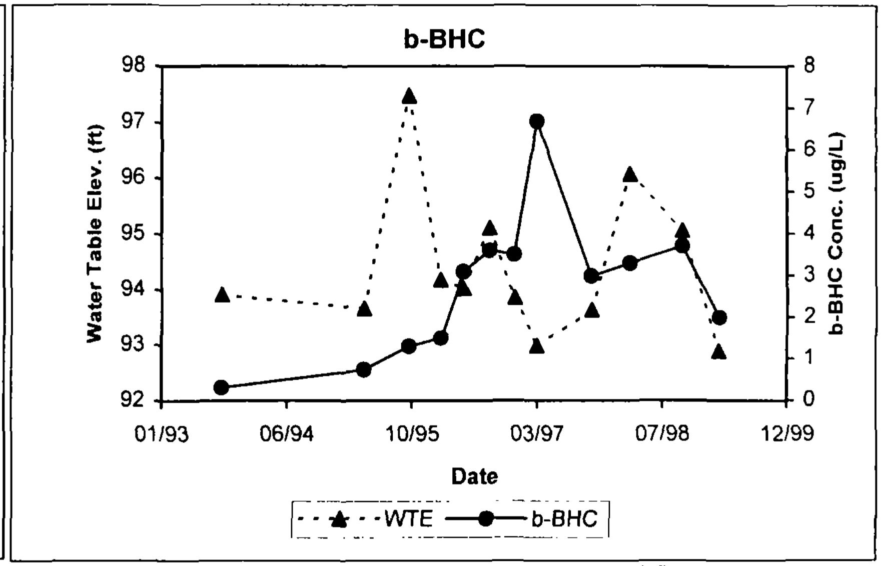
ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-9D

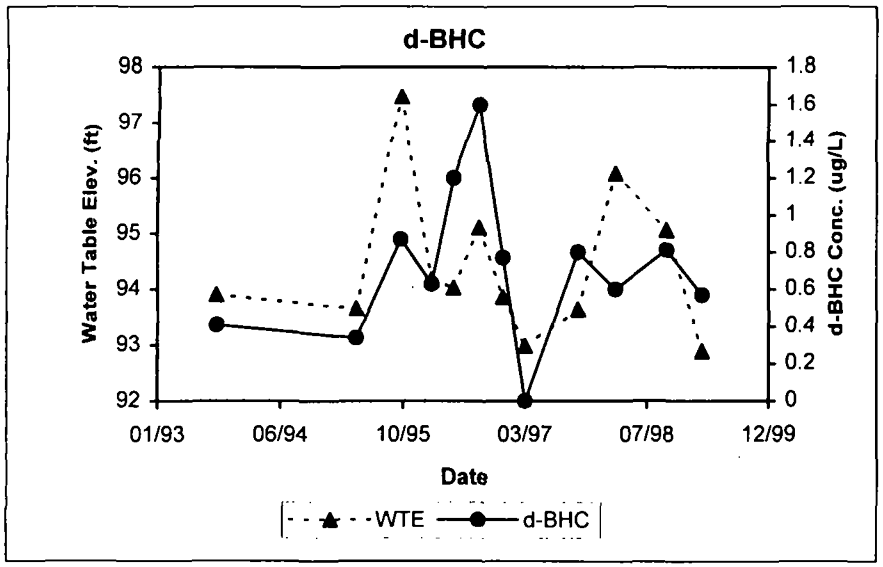
No Chlordane Detected

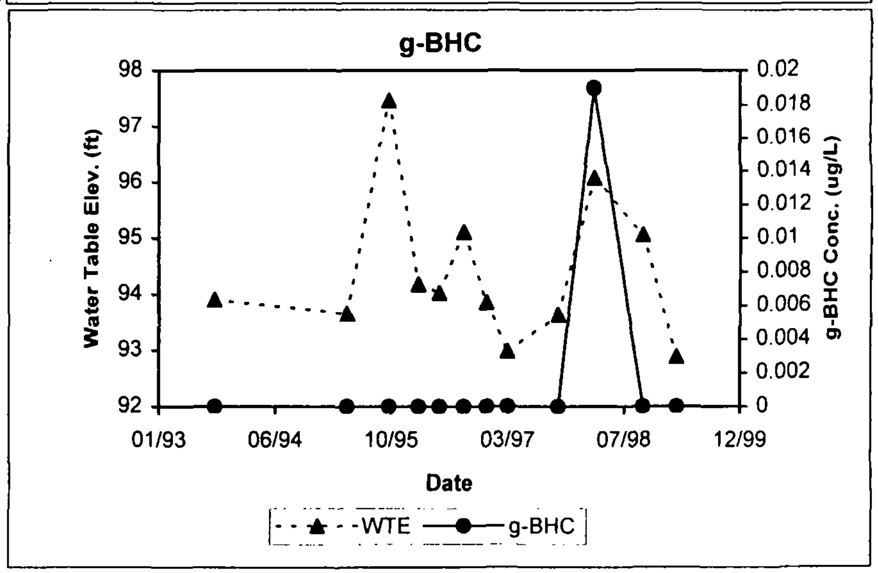
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-9D



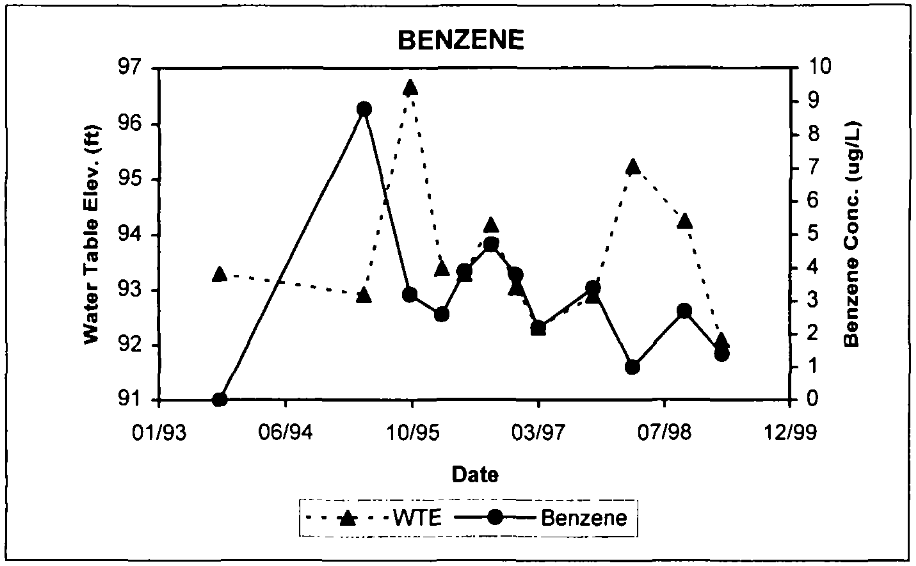


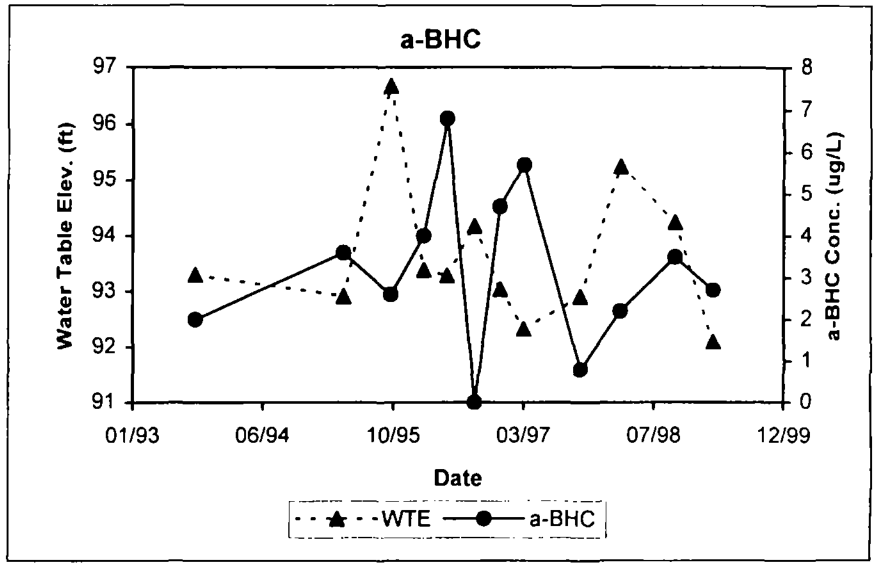




Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-10S





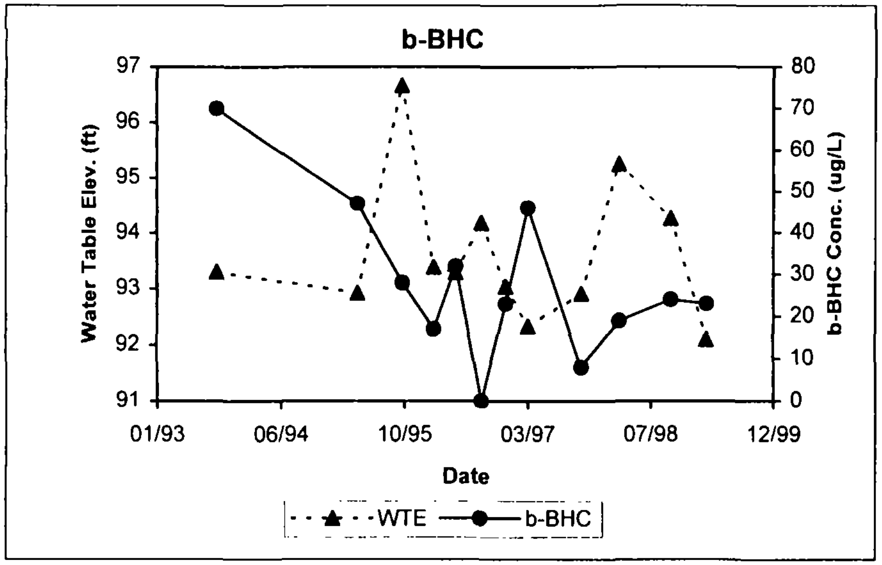
No Toluene Detected

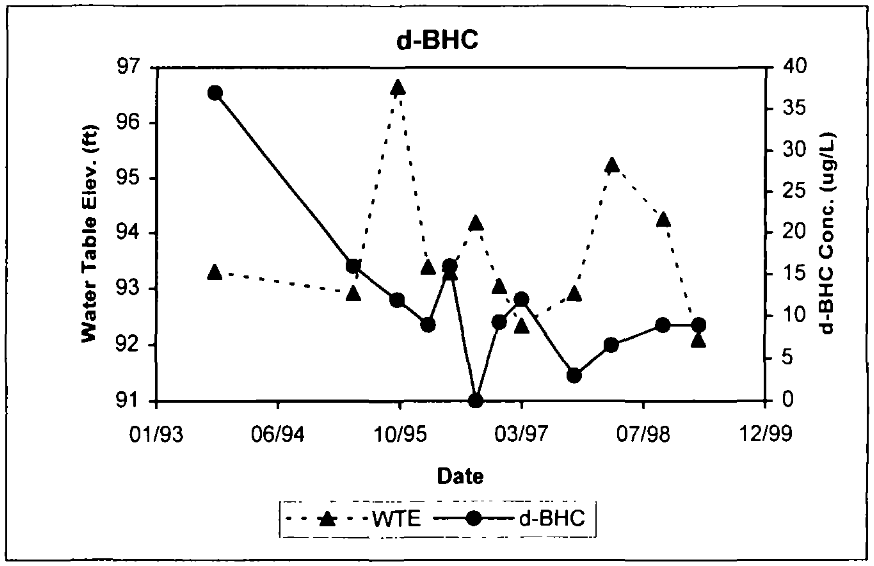
No Ethylbenzene Detected

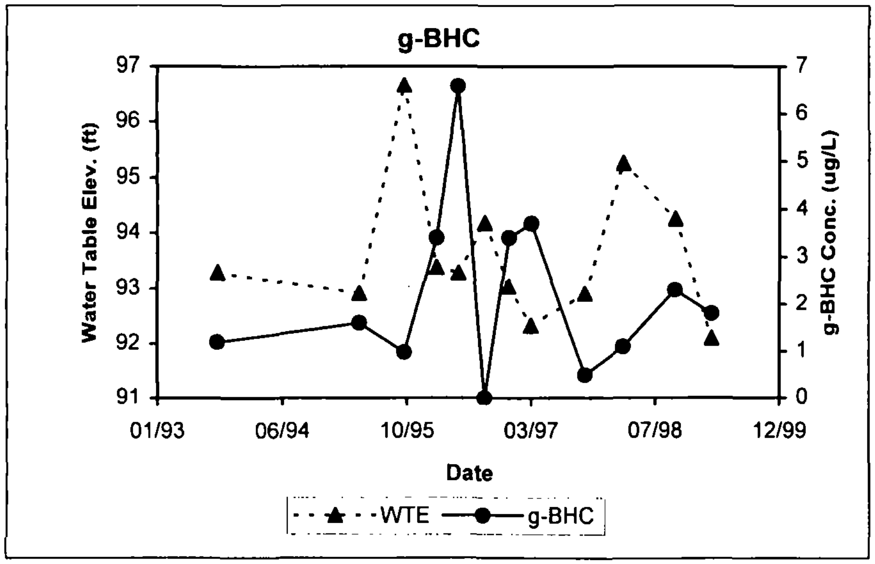
No Xylenes Detected

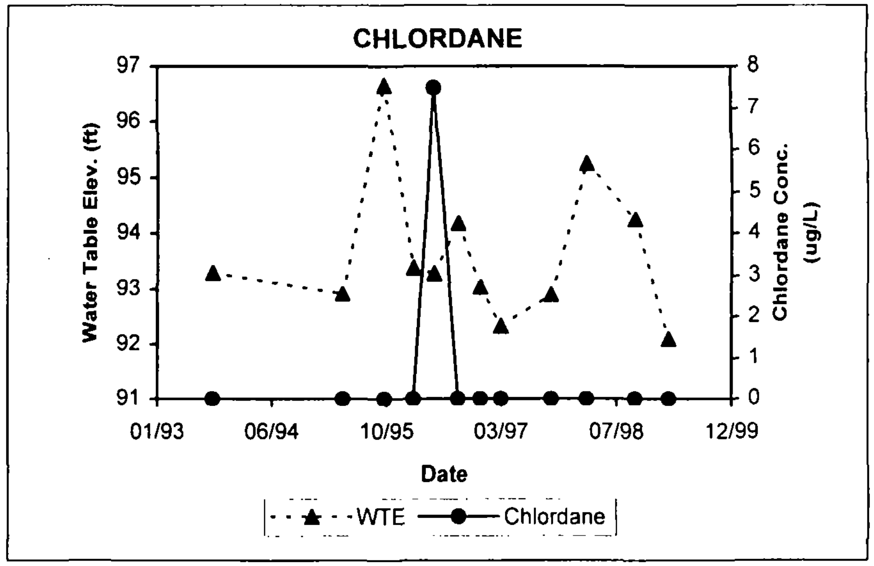
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-10S



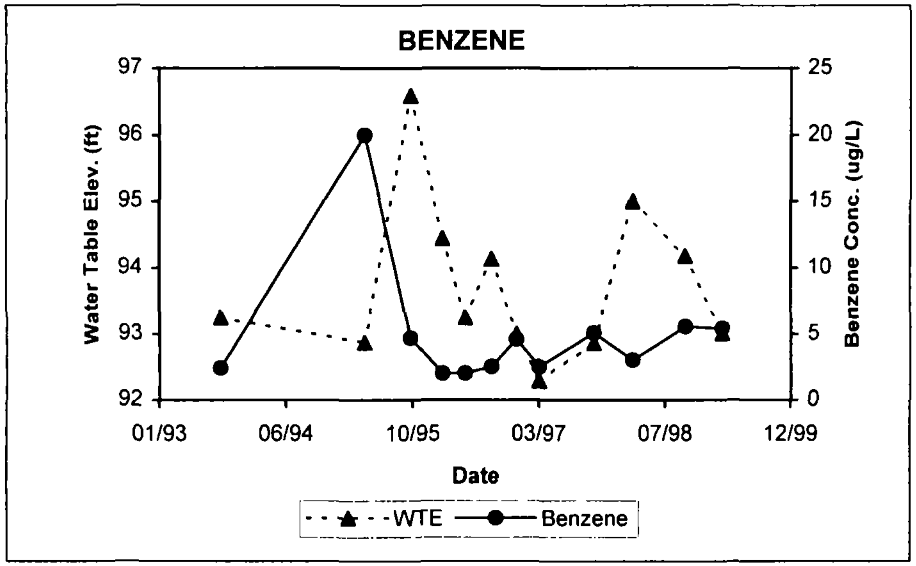






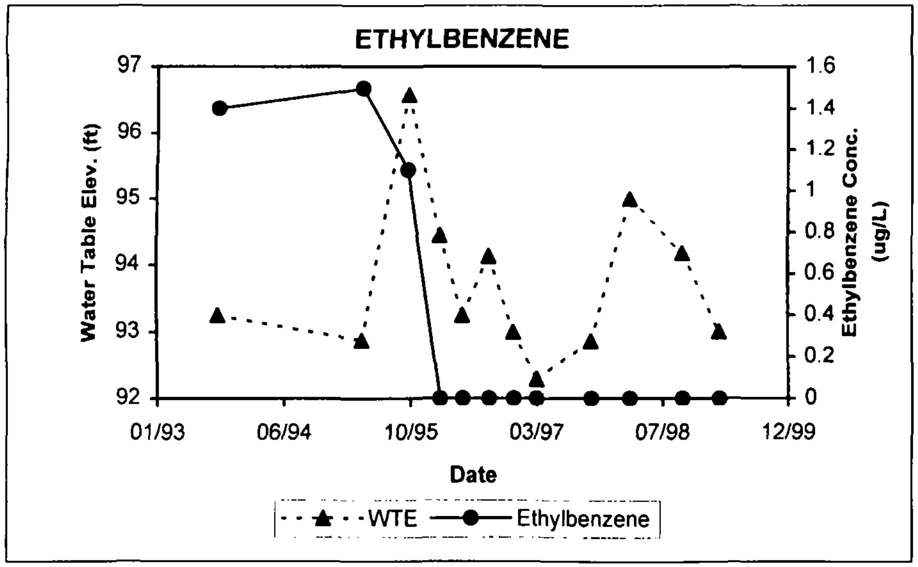
Data through 3/99

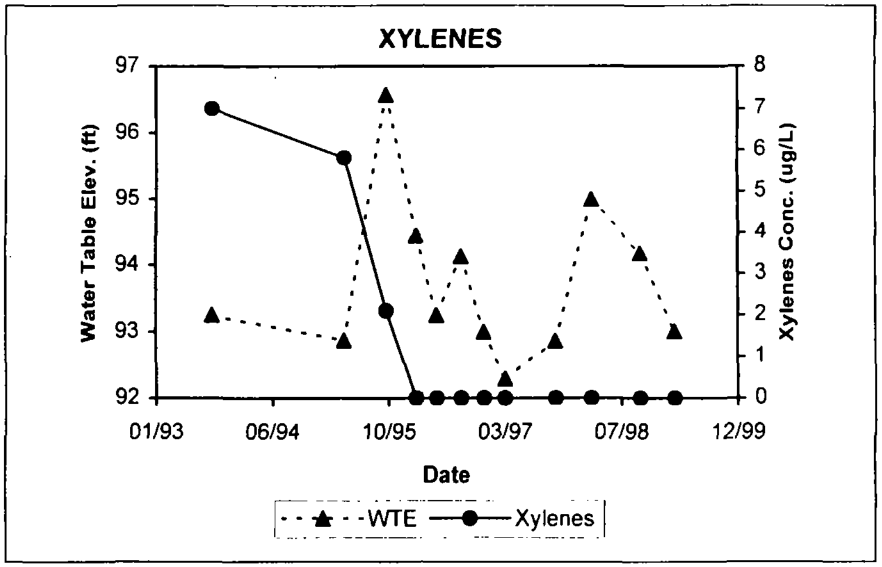
ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-10D



No Toluene Detected

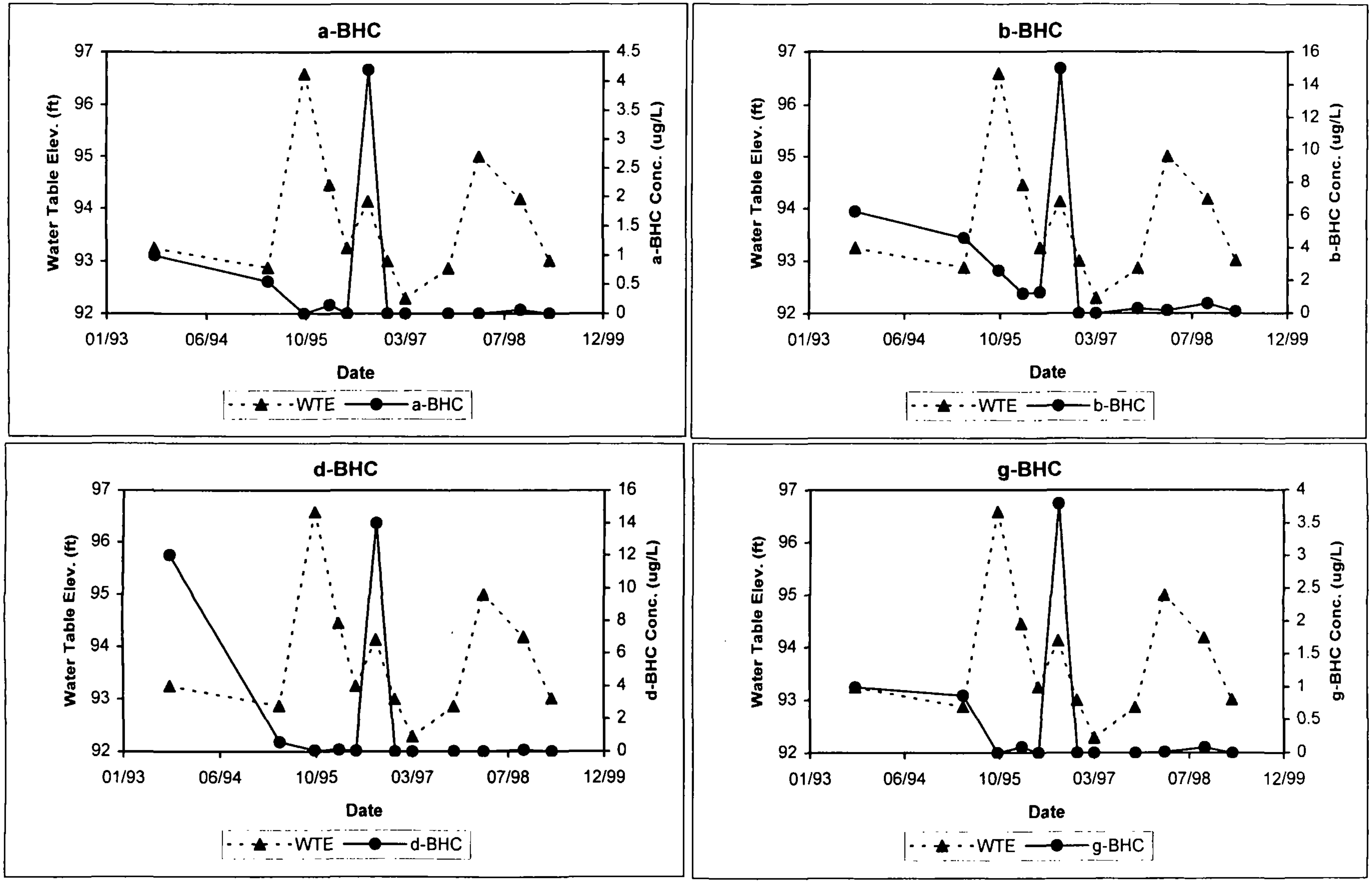
No Chlordane Detected





Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-10D



Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-11

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

No d-BHC Detected

No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-12

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

No d-BHC Detected

No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-13

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

No d-BHC Detected

No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-14

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

No d-BHC Detected

No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-15

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

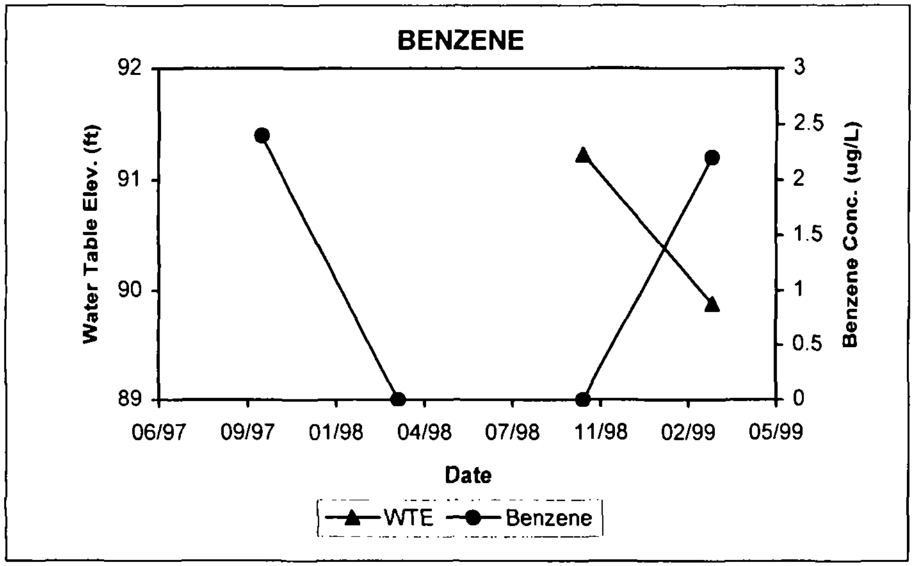
No d-BHC Detected

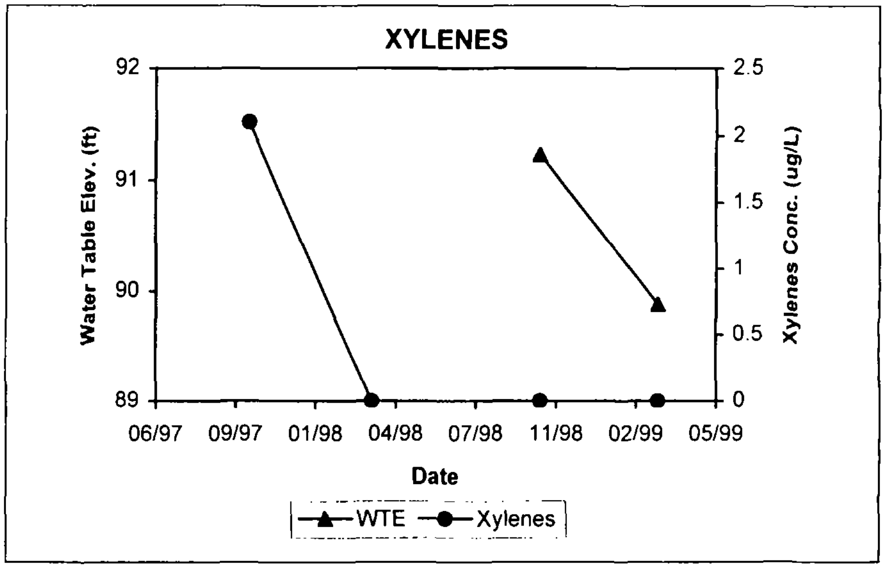
No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-16S





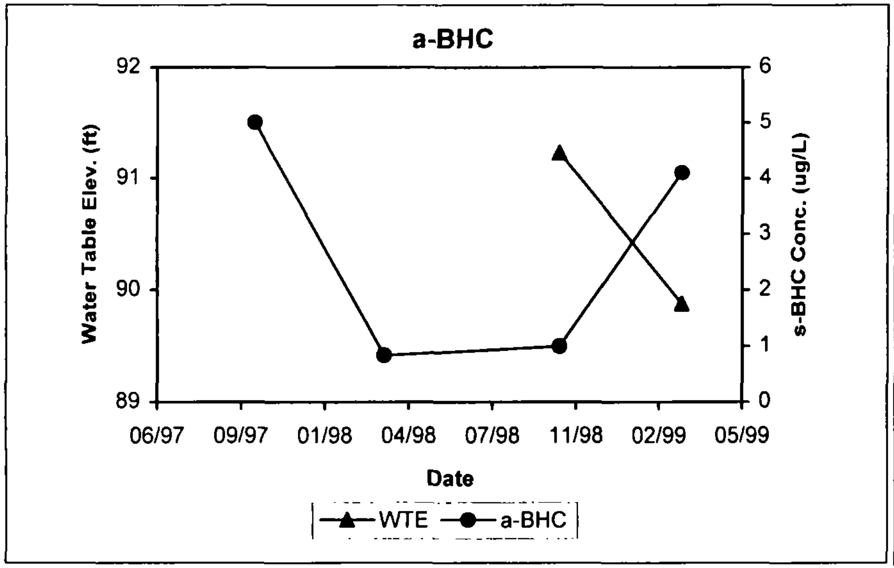
No Toluene Detected

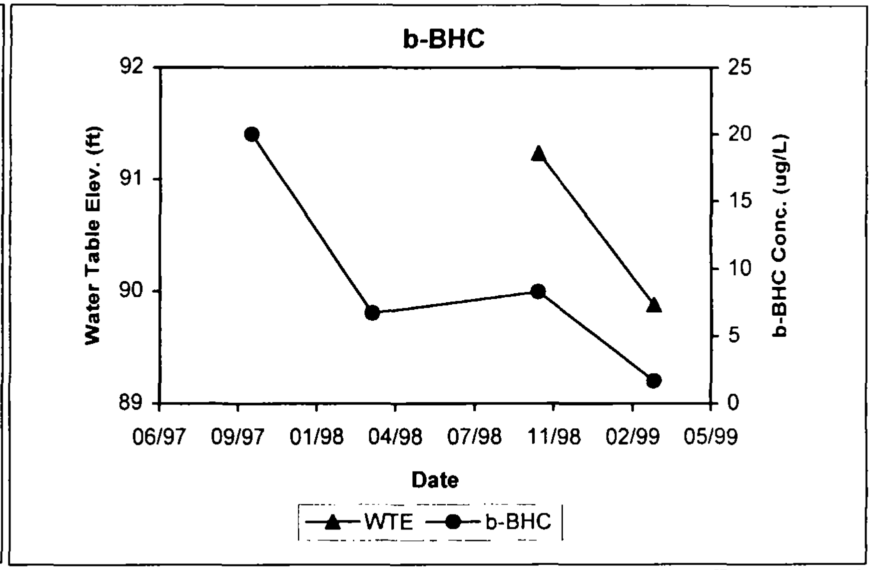
No Ethylbenzene Detected

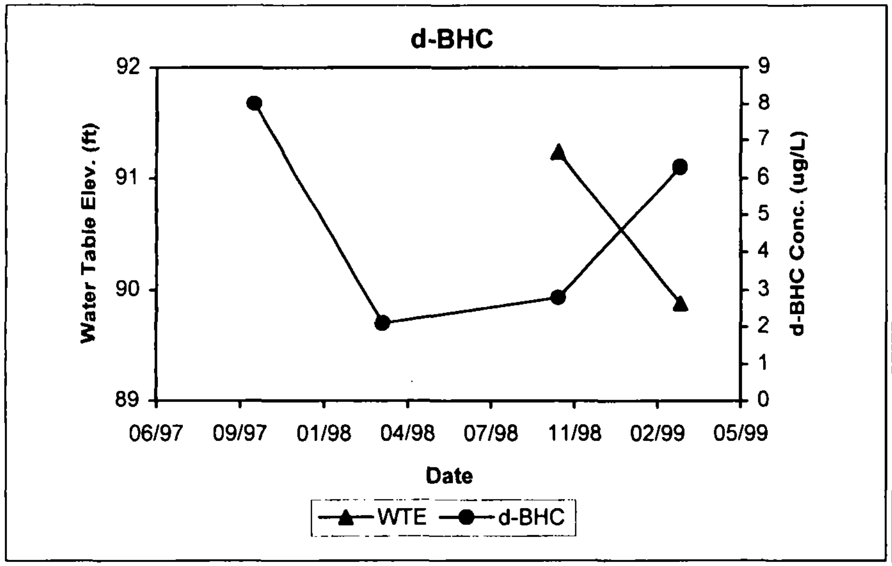
No Chlordane Detected

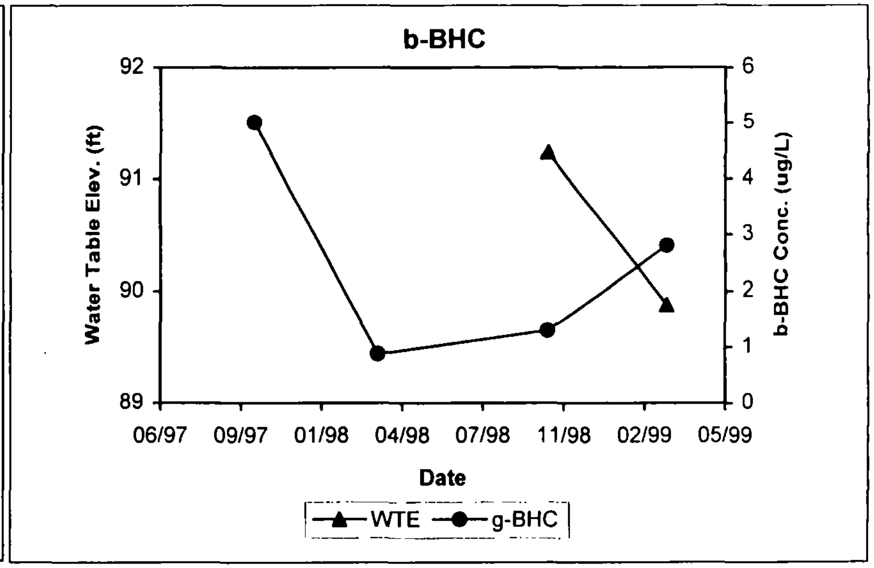
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-16S



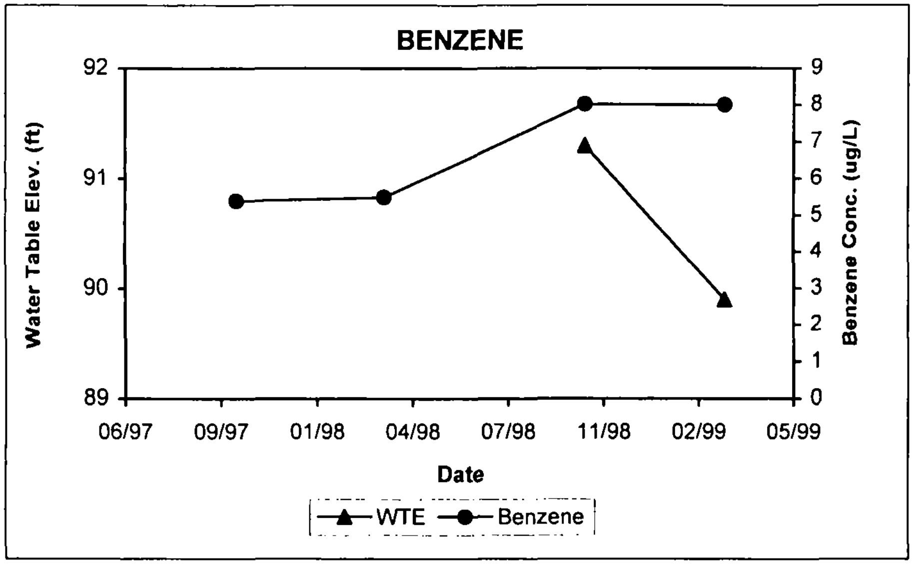


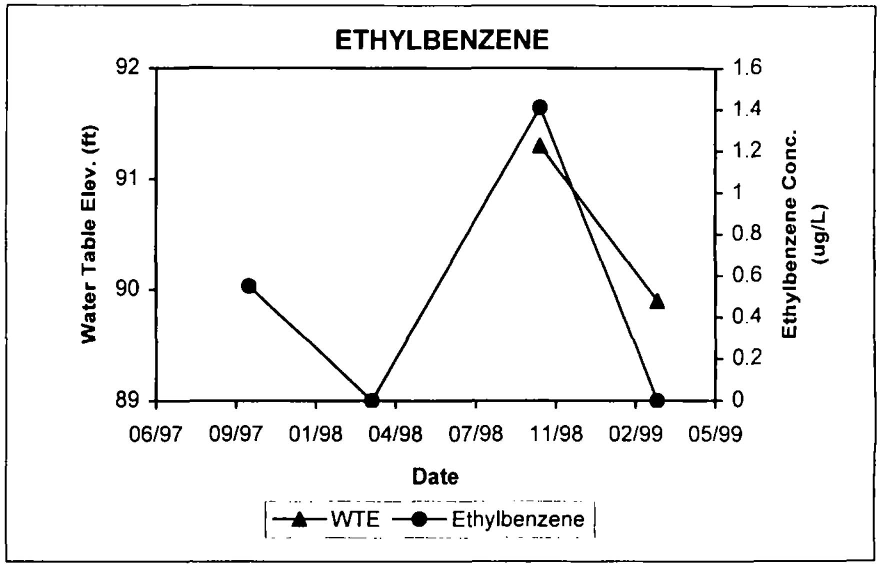


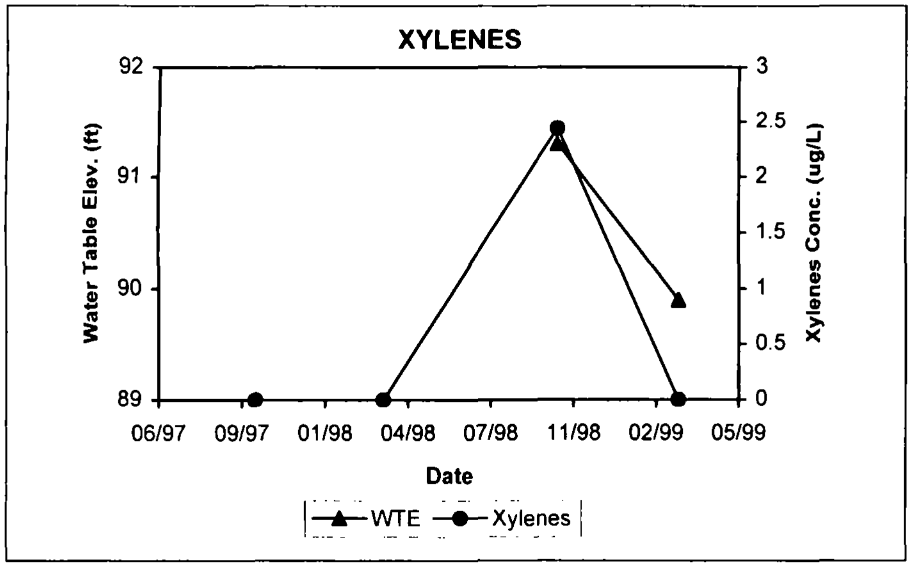


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-16D





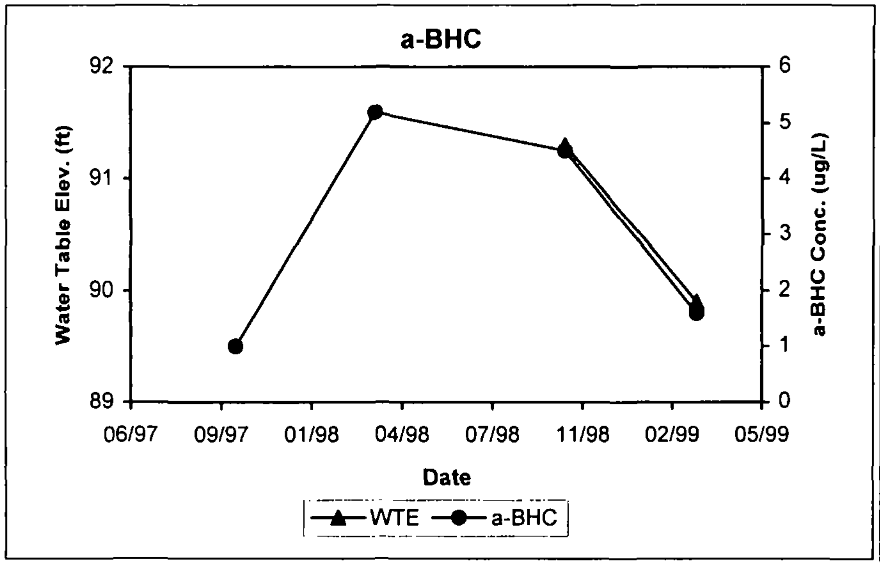


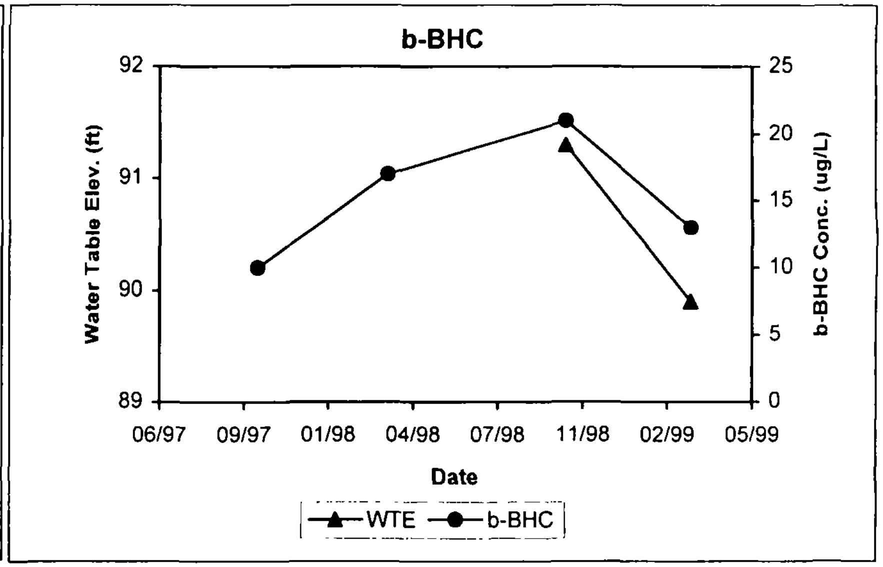
No Toluene Detected

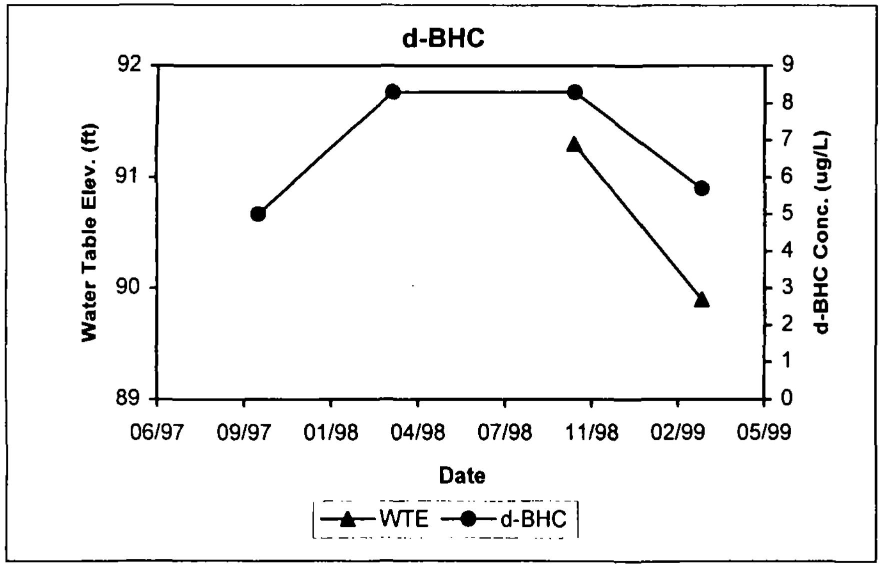
No Chlordane Detected

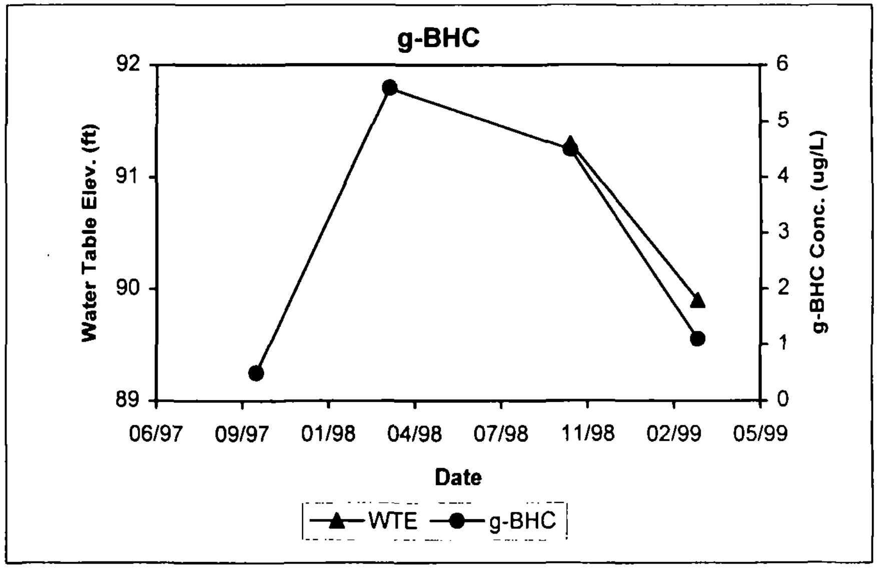
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-16D



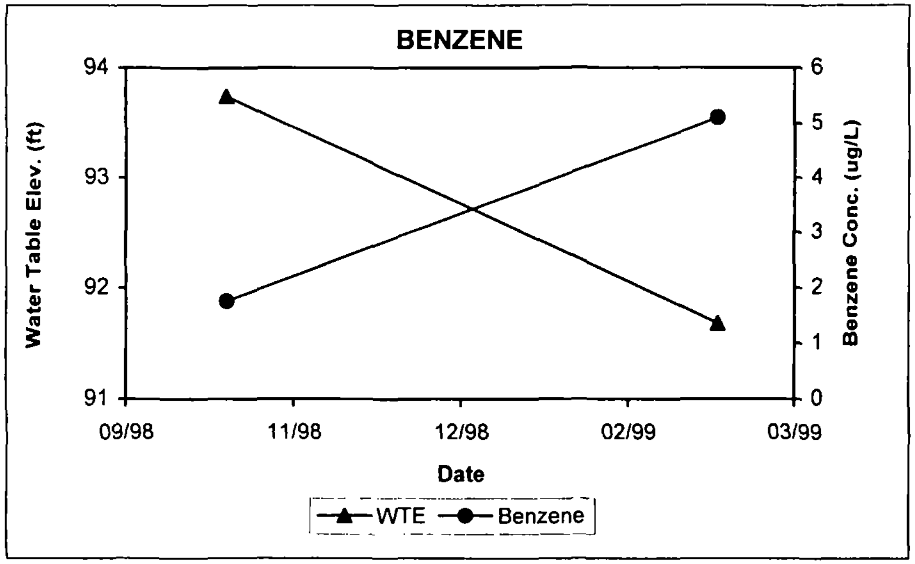


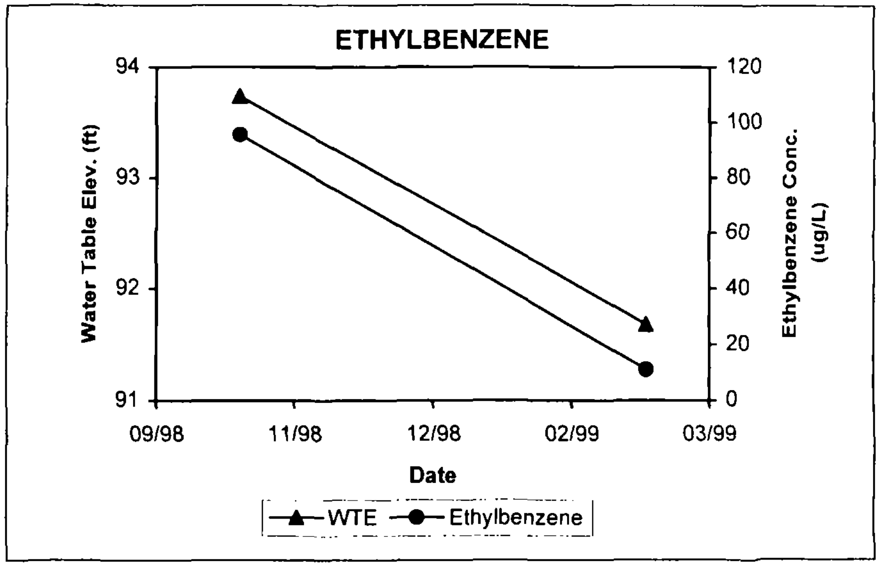


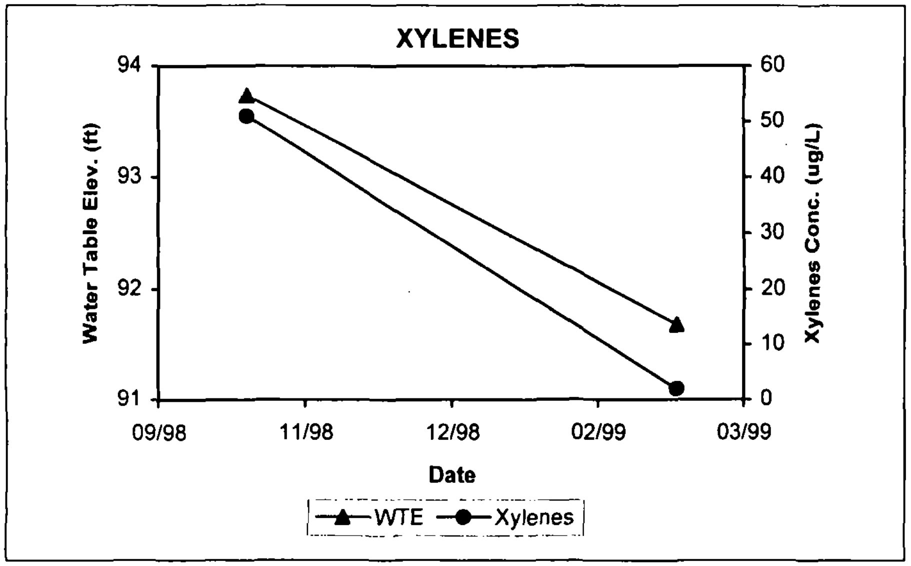


Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-17





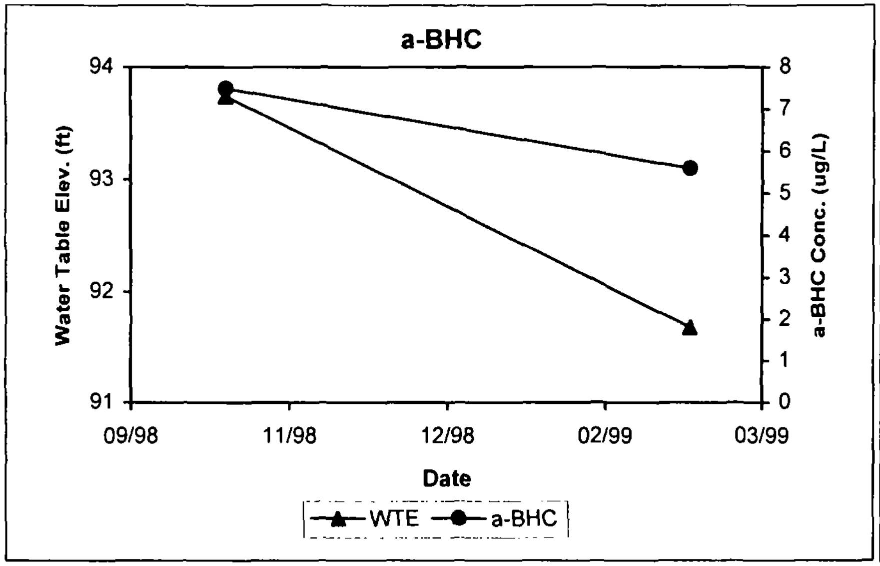


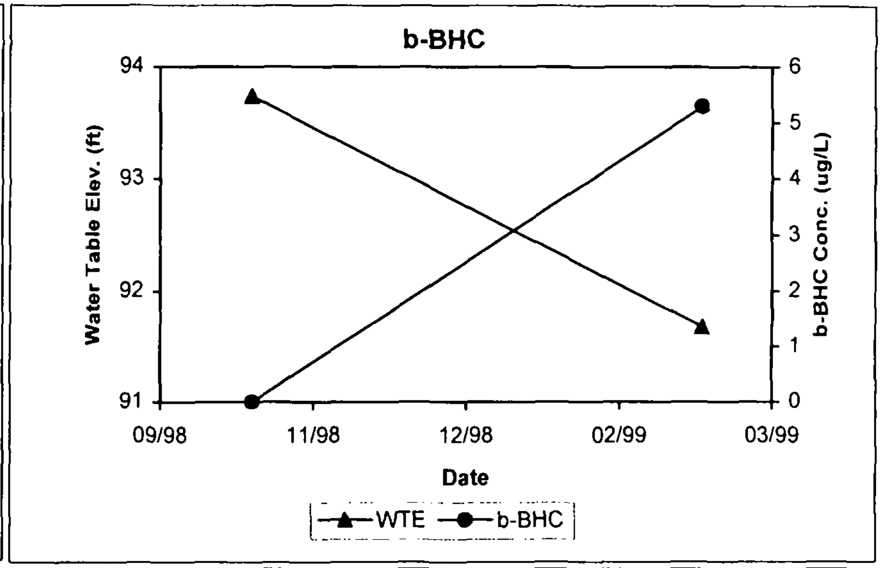
No Toluene Detected

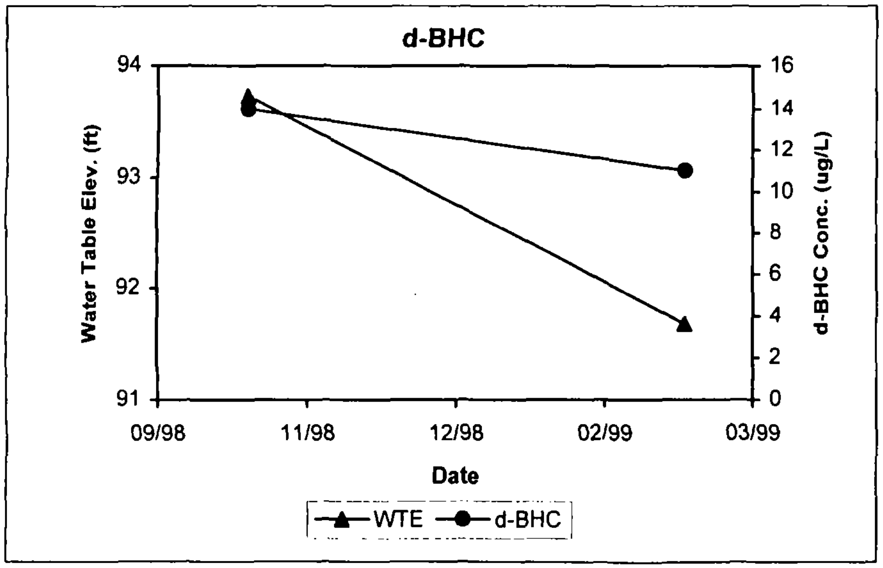
No Chlordane Detected

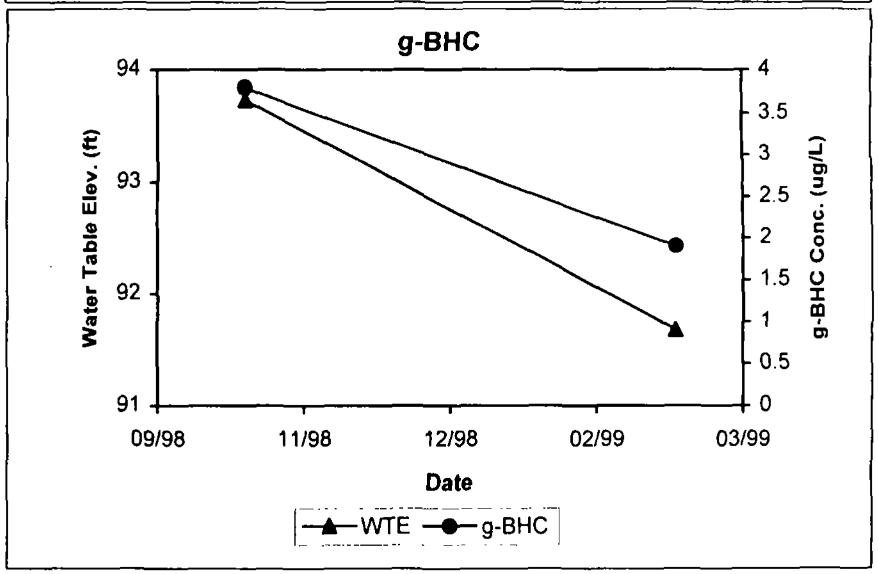
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-17









Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-A

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

No d-BHC Detected

No g-BHC Detected

No Chlordane Detected

Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-D

No Benzene Detected

No Toluene Detected

No Ethylbenzene Detected

No Xylenes Detected

No a-BHC Detected

No b-BHC Detected

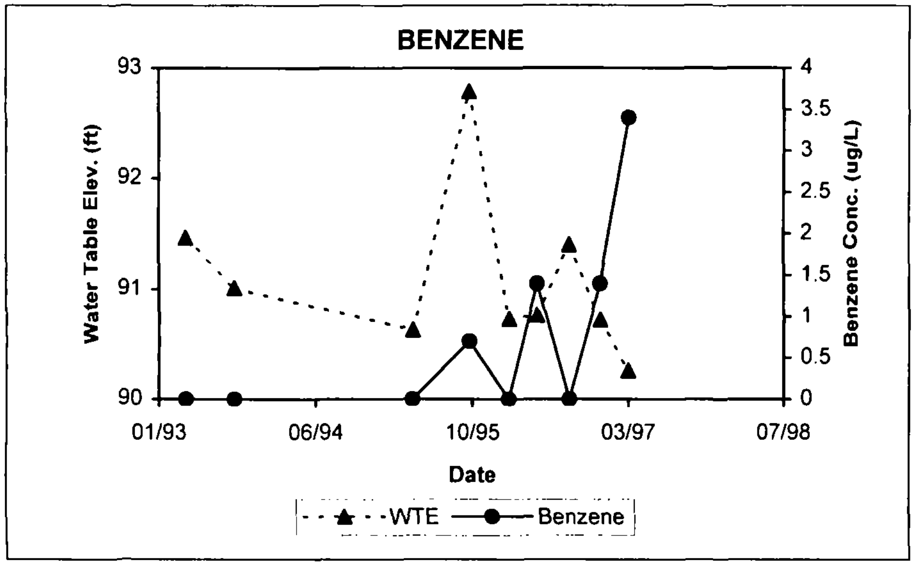
d-BHC Detected Only in Last Sampling Event (0.08 ug/L)

No g-BHC Detected

No Chlordane Detected

Data through 3/99

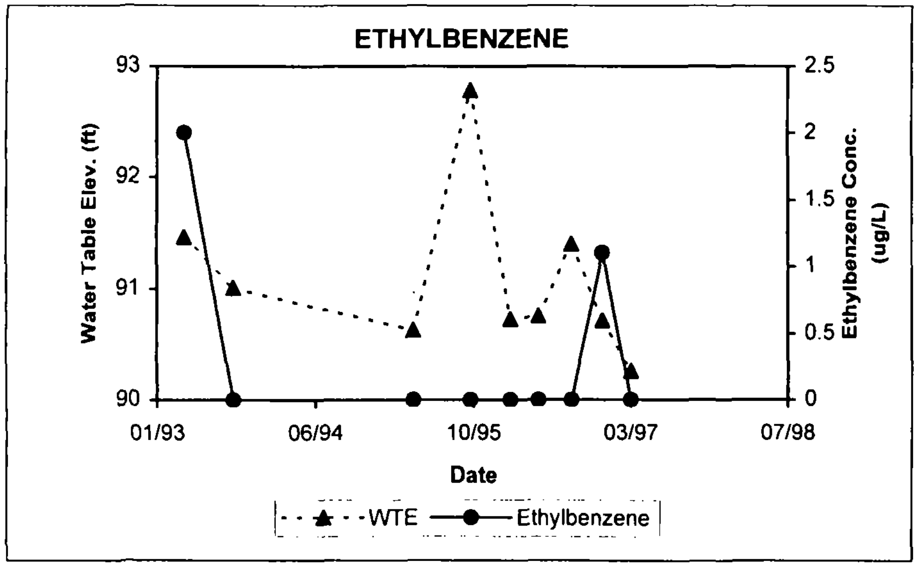
ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-P

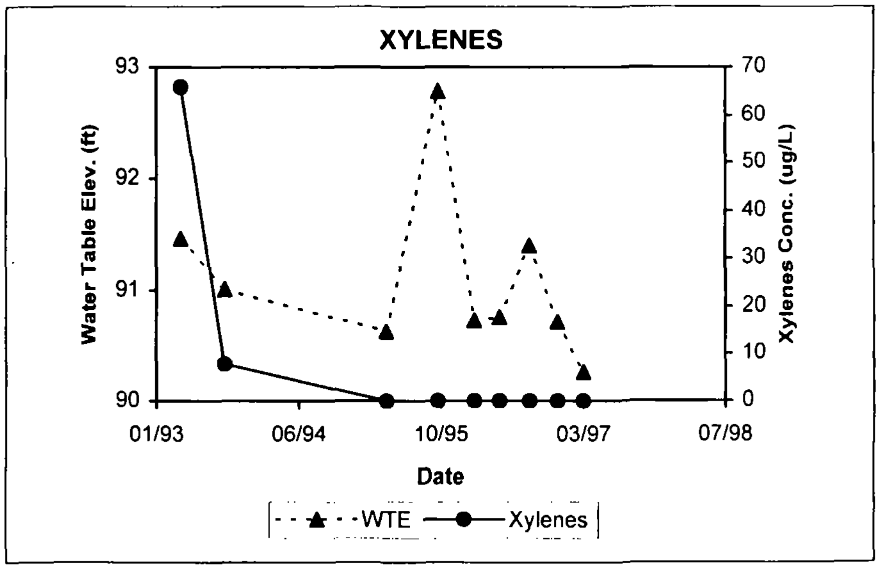


No Toluene Detected

No Chlordane Detected

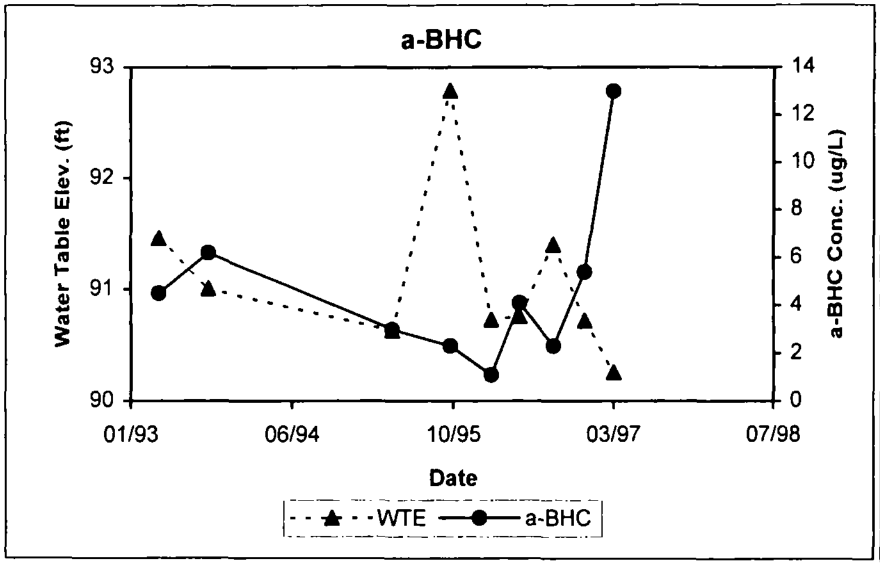
No Data After 3/97

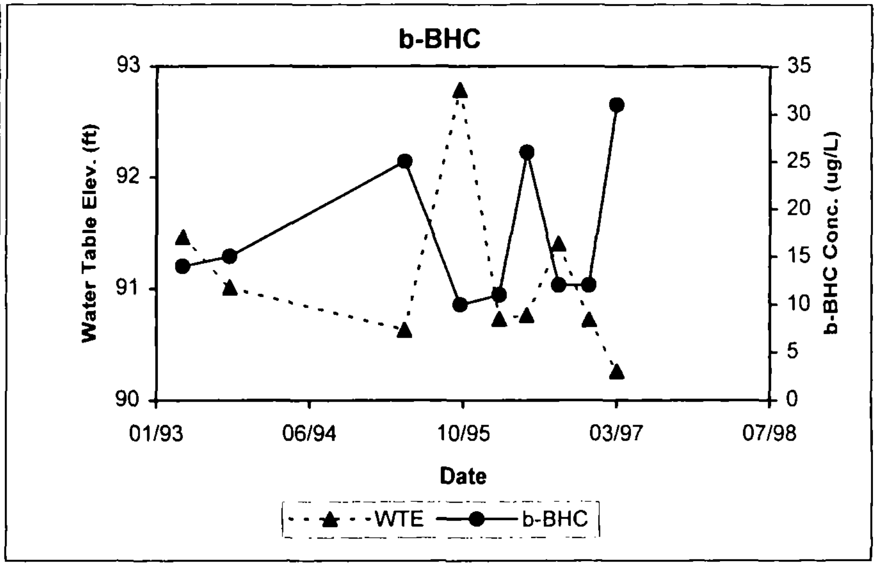


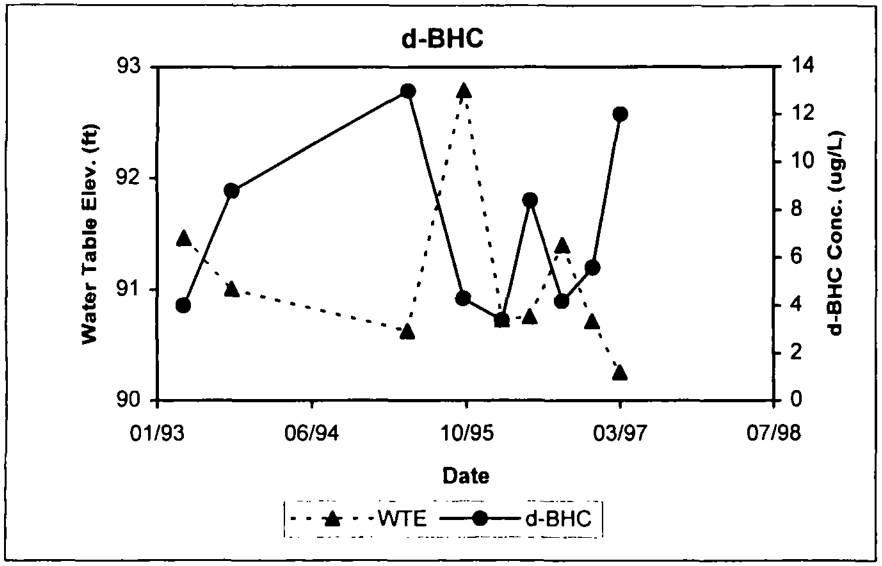


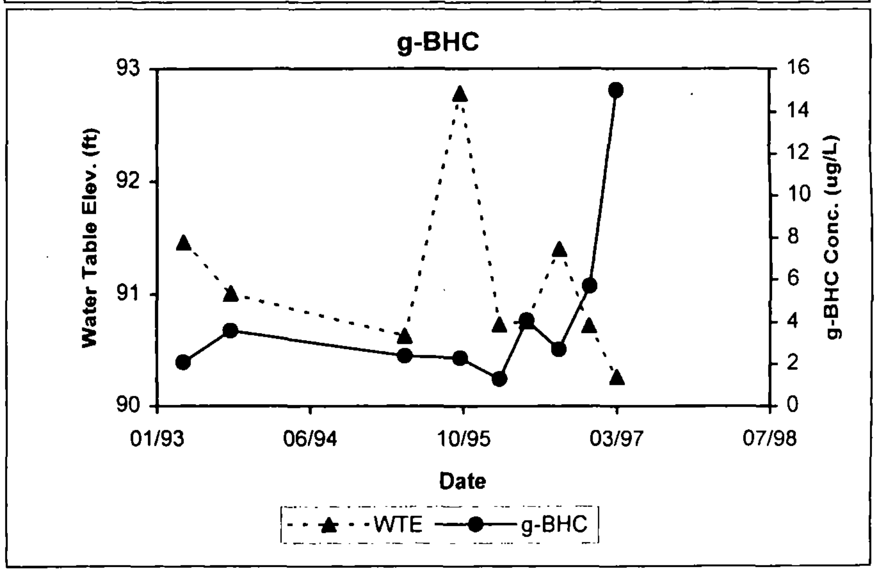
Data through 3/99

ORLANDO, FLORIDA SITE
CONCENTRATION VERSES TIME - MW-P









Data through 3/99

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
BERM 1			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 14			RAR App F-2	ND	ND		1.0	ND	ND		ND			
BERM 15			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 16			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 17			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 18			RAR App F-2	ND	ND		1.4	ND	ND		ND			
BERM 19			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 2			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 3			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 4			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 5			RAR App F-2	ND	ND		ND	ND	ND		ND			
BERM 6			RAR App F-2	5.4	2.9		ND	ND	7.3		ND			
BG-SS-01	0-0.167		RI	<0.004	<0.004	<0.005	0.62	<0.004	0.009	<0.005	<0.004	<0.005	<0.005	<0.005
BG-SS-02	0-0.167		RI	<0.004	<0.004	<0.005	0.063	<0.004	<0.005	<0.005	<0.004	<0.005	<0.005	<0.005
BG-SS-03	0-0.167		RI	<0.04	<0.04	<0.005	0.69	<0.04	<0.05	<0.005	<0.04	<0.005	<0.005	<0.005
BG-SS-04	0-0.167		RI	<0.08	<0.08	<0.005	3.4(14)	<0.08	<0.1	<0.005	<0.08	<0.005	<0.005	<0.005
BG-SS-05	0-0.167		RI	<0.004	<0.004	<0.005	0.89(14)	<0.004	0.023	<0.005	<0.004	<0.005	<0.005	<0.005
BG-SS-06	0-0.167		RI	<0.004	<0.004	<0.005	0.66(14)	<0.004	<0.005	<0.005	<0.004	<0.005	<0.005	<0.005
BG-SS-06	0-0.167	BG-SS-106	RI	<0.004	<0.004	<0.005	0.67(14)	<0.004	<0.005	<0.005	<0.004	<0.005	<0.005	<0.005
BG-SS-07	0-0.167		RI	<0.4	<0.4	<0.005	37(14)	<0.4	<0.5	<0.005	<0.4	<0.005	<0.005	<0.005
BG-SS-07	1		RI	<0.004	<0.004	<0.005	0.66(14)	<0.004	0.02	<0.005	<0.004	<0.005	<0.005	<0.005
BG-SS-08	0-0.167		RI	<0.2	<0.2	<0.005	7.6(14)	<0.2	<0.25	<0.005	<0.2	<0.005	<0.005	<0.005
BG-SS-08	1		RI	<0.04	<0.04	<0.005	1.4(14)	<0.04	<0.05	<0.005	<0.04	<0.005	<0.005	<0.005
BG-SS-09	0-0.167		RI	<0.08	<0.08	<0.005	5.7(14)	<0.08	<0.1	<0.005	<0.08	<0.005	<0.005	<0.005
BG-SS-10	0-0.167		RI	<0.004	<0.004	<0.005	0.42(14)	<0.004	<0.005	<0.005	<0.004	<0.005	<0.005	<0.005
CO-EC-01			RI	2	2	nd	30	nd	2.5	nd	2	0.17	nd	nd
CO-EC-02			RI	2	2	nd	200	nd	2.5	nd	2	nd	nd	nd
CO-EC-03			RI	2	2	nd	110	nd	2.5	nd	2	0.27	nd	nd
CO-EC-04			RI	0.2	0.2	nd	21	nd	0.25	nd	0.2	0.31	nd	nd
CO-EC-05			RI	2	2	nd	12	nd	2.5	nd	2	0.25	nd	nd
CO-EC-06			RI	2	2	nd	120	nd	6.8	nd	2	0.25	nd	nd
CO-EC-07			RI	2	2	nd	75	nd	2.5	nd	2	0.25	nd	nd
CO-EC-08			RI	0.4	0.4	nt	23	nt	0.5	nt	0.4	nt	nt	nt
CO-EC-09			RI	2	2	nd	230	nd	2.5	nd	2	nd	nd	nd
CO-EC-10			RI	0.2	0.2	nd	23	nd	0.25	nd	0.2	nd	nd	nd
CO-EC-11			RI	0.2	0.2	nd	8.3	nd	0.53	nd	0.2	nd	nd	nd
CO-EC-12			RI	2	2	nd	85	nd	20	nd	2	nd	0.18	nd
CO-EC-13			RI	2	2	nd	59	nd	4.7	nd	2	nd	nd	nd
CO-EC-14			RI	2	2	nd	43	nd	2.5	nd	2	nd	nd	nd
CO-EC-15			RI	2	2	nd	27	nd	2.5	nd	2	nd	nd	nd
CO-EC-16			RI	2	2	nd	23	nd	3.3	nd	2	nd	nd	nd
CO-EC-17			RI	2	2	nd	32	nd	2.8	nd	2	nd	nd	1.4
CO-EC-18			RI	0.2	0.2	nd	10	nd	1	nd	0.2	nd	nd	nd
CO-EC-19			RI	0.2	0.2	nd	1.7	nd	0.25	nd	0.2	nd	nd	nd
CO-EC-20			RI	0.2	0.2	nd	24	0.3	4.8	nd	0.2	nd	nd	nd
CO-EC-21			RI	0.2	0.2	nd	4	nd	0.54	20	0.2	2.8	nd	420
CO-EC-22			RI	0.4	0.4	nd	9.3	nd	1.6	85	0.4	nd	nd	420
CO-EC-23			RI	0.4	0.4	nd	4.2	nd	5.3	nd	0.4	nd	nd	nd
CO-EC-24			RI	2	2	nd	16	nd	5.5	0.23	2	0.76	nd	1.2
CO-EC-25			RI	0.2	0.2	nd	2.5	nd	0.68	0.13	0.2	0.27	nd	1.06
CO-EC-26			RI	0.2	0.2	nd	1	nd	0.25	nd	0.2	0.22	nd	nd
CO-EC-27			RI	0.4	0.4	nd	23	nd	7	nd	0.4	0.18	nd	nd
CO-EC-28			RI	3	1.6	nd	87	2.3	41	nd	1.1	nd	nd	nd
CO-EC-29			RI			nt		nt		nt		nt	nt	nt
CO-EC-30			RI			nt		nt		nt		nt	nt	nt
CO-EC-31			RI	0.04	0.04	nt	0.45	nt	0.53	nt	0.04	nt	nt	nt
CO-EC-31		CO-EC-31dup	RI	0.04	0.04		0.64		0.61		0.04			
CO-EC-32			RI	0.2	0.2	nd	82	1.8	3.6	nd	0.2	nd	nd	nd
CO-EC-33			RI	0.2	0.38	na	2	nd	0.25	na	0.2	na	na	na
CO-EC-34			RI	0.8	0.8	nd	29	nd	1	nd	0.8	0.23	nd	8.4
CO-EC-35			RI	1	1	nd	8.3	nd	5.8	nd	1	nd	nd	nd
CO-EC-36			RI	0.4	0.93	nd	13	nd	1.8	nd	0.4	nd	nd	0.21
CO-EC-37			RI	1	1	nd	16	nd	8.5	nd	1	nd	nd	nd
CO-EC-38			RI	2	2	nd	33	nd	2.5	nd	2	nd	nd	nd
CO-EC-39			RI	0.8	0.8	nd	17	nd	1	nd	0.8	nd	nd	nd
CO-EC-40			RI	2	2	nd	350	nd	2.5	nd	2	nd	nd	nd
CO-EC-41			RI	0.2	0.2	nd	5	nd	0.25	nd	0.2	nd	nd	nd
CO-EC-42			RI	0.2	0.2	nd	26	nd	0.57	nd	0.2	nd	nd	nd
CO-EC-43			RI	0.1	0.1	nd	0.92	nd	0.12	nd	0.1	nd	nd	nd
CO-EC-44			RI	0.004	0.004	nd	0.43	nd	0.013	nd	0.004	nd	nd	nd
CO-EC-45			RI	0.4	0.4	nd	2.7	nd	2.8	nd	0.4	nd	nd	nd
CO-EC-46			RI	2	2	nd	67	2.3	24	nd	2	nd	nd	nd
CO-EC-47			RI	0.5	0.2	0.14	16	0.87	10	nd	0.3	nd	nd	1
CO-EC-48			RI	2	0.4	nd	57	3.2	42	nd	2.5	nd	nd	0.91
CO-EC-49			RI	4	4	nd	140	5.5	62	nd	4	nd	nd	0.98

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
CO-EC-50			RI	0.08	0.08	nd	1	nd	0.15	nd	0.08	nd	3.2	nd
CO-EC-51			RI	0.2	0.2	nd	9.2	0.22	2.7	nd	0.2	nd	nd	nd
CO-EC-52			RI	0.4	0.4	nd	20	nd	1	nd	0.4	nd	nd	nd
CO-EC-53			RI	0.8	0.8	nd	20	nd	2.3	nd	0.8	nd	2.3	0.46
CO-EC-54			RI	0.8	0.8	nd	85	1.8	9	nd	0.8	nd	nd	nd
CO-EC-55			RI	0.4	0.4	nd	17	nd	4.2	nd	0.4	nd	nd	nd
CO-EC-56			RI	4	4	nd	80	4.7	38	nd	4	nd	nd	0.97
CO-EC-57			RI	20	20	nd	190	nd	74	2	20	nd	nd	18
CO-EC-58			RI	0.04	0.04	nd	0.28	nd	0.11	nd	0.04	nd	nd	nd
CO-EC-59			RI	4	4	0.26	180	8.3	90	2.2	6.7	nd	nd	8.1
CO-EC-60			RI	0.004	0.004	nd	0.048	0.014	0.011	nd	0.004	nd	nd	nd
CO-EC-61			RI	0.4	0.4	nd	3.2	nd	0.82	nd	0.4	nd	nd	nd
CO-EC-62			RI	0.08	0.08	nd	2	nd	0.1	nd	0.08	nd	nd	nd
CO-EC-63			RI	2	2	0.14	48	2.6	30	nd	2	nd	nd	nd
CO-EC-64			RI	1	1	nd	120	6.8	58	nd	1	nd	nd	1.4
CO-EC-65			RI	0.8	0.8	nd	110	nd	1	nd	0.8	nd	nd	nd
CO-EC-66			RI	2	2	nd	180	nd	4.2	nd	2	nd	nd	nd
CO-EC-67			RI	2	2	nd	18	nd	2.5	nd	2	nd	nd	nd
CO-EC-68			RI	4	4	nd	240	nd	20	nd	4	nd	nd	1
CO-EC-69			RI	2	2	nd	18	nd	2.5	nd	2	nd	nd	nd
CO-EC-70			RI	2	2	nd	15	nd	2.8	nd	2	nd	nd	nd
CO-EC-71			RI	0.04	0.04	nd	0.38	nd	0.05	nd	0.04	nd	nd	nd
CO-EC-72			RI	12	2.4	nd	98	7.5	130	3.6	14	nd	0.45	150
CO-EC-73			RI	0.4	0.4	nd	7.3	nd	3.8	2	0.4	nd	0.12	11
CO-EC-74			RI	0.4	0.4	nd	3.2	nd	0.8	nd	0.4	nd	nd	2.3
CO-EC-75			RI	0.2	0.2	nd	0.83	nd	0.31	0.61	0.2	nd	nd	9.1
CO-EC-76			RI	1	1	nd	95	1.3	14	6.2	1	nd	0.21	62
CO-EC-77			RI	0.08	0.08		3.3		0.1		0.08			
CO-EC-78			RI	0.004	0.01		0.16		0.59		0.004			
CO-EC-79			RI	0.4	0.4		1.7		0.5		0.4			
CO-EC-80			RI	0.08	0.18		3		0.28		0.08			
CO-EC-81			RI	0.4	0.4		2.8		0.5		0.4			
CO-EC-82			RI	0.02	0.02		0.53		0.04		0.02			
CO-EC-83			RI	0.04	0.05		1		0.097		0.04			
CO-EC-84			RI	0.4	0.4		1.4		0.5		0.4			
CO-EC-85			RI	0.08	0.08		1.7		0.12		0.08			
CO-EC-86			RI	0.004	0.005		0.16		0.005		0.004			
CO-EC-87			RI	0.004	0.004		0.088		0.005		0.004			
CO-EC-88			RI	0.4	0.4		11		0.98		0.4			
CO-EC-89			RI	0.08	0.08		2.8		0.1		0.08			
CO-EC-90			RI	0.4	0.4		3.9		2		0.4			
CO-EC-90		CO-EC-90dup	RI	0.08	0.09		5.3		0.1		0.08			
CO-EC-91			RI	0.08	0.08		0.26		0.1		0.08			
CO-EC-92			RI	1.1	0.4		20		21		1			
CRT 11-2			RI	5	5		140		130		5			
CRT 14-1			RI	0.5	0.5		3		1.5		0.5			
CRT 14-2			RI	0.5	0.5		0.5		1.8		0.5			
CRT 15-2			RI	0.5	0.5		0.5		0.5		0.5			
CRT 9-2			RI	0.5	0.5		0.5		0.5		0.5			
CSP 1-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 1-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 1-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 10-1			RAR App F-2	ND	ND		24	ND	7.6		ND			
CSP 10-2			RAR App F-2	ND	ND		19	ND	6.4		ND			
CSP 10-3			RAR App F-2	ND	ND		1.4	ND	ND		ND			
CSP 2-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 2-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 2-3			RAR App F-2	ND	ND		16	ND	8		ND			
CSP 3-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 3-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 3-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 4-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 4-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 4-3			RAR App F-2	ND	ND		1.3	ND	ND		ND			
CSP 5-1			RAR App F-2	ND	ND		50	ND	15		ND			
CSP 5-2			RAR App F-2	ND	ND		3.1	ND	1		ND			
CSP 5-3			RAR App F-2	ND	ND		10	ND	2.2		ND			
CSP 6-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 6-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 6-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 7-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 7-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 7-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 8-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
CSP 8-2			RAR App F-2	ND	ND		ND	ND	ND		ND			

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
CSP 8-3			RAR App F-2	ND	ND		2	ND	ND		ND			
CSP 9-1			RAR App F-2	ND	ND		29	ND	17		1			
CSP 9-2			RAR App F-2	ND	ND		6.8	ND	4.2		ND			
CSP 9-3			RAR App F-2	ND	ND		5.6	ND	3.2		ND			
DEEP EX-1			RAR App F-2	ND	ND		5.5	ND	3.4		ND			
DEEP EX-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
DEEP EX-3			RAR App F-2	ND	ND		5.9	ND	1.6		ND			
DEEP EX-4			RAR App F-2	ND	ND		2.4	ND	2.2		ND			
DEEP EX-5			RAR App F-2	ND	ND		1.4	ND	ND		ND			
DEEP EX-6			RAR App F-2	ND	ND		2.8	ND	1.1		ND			
EB-1117-01			RAPA	<0.00008	<0.00008		<0.0017	<0.00008	<0.00017		<0.00008			
EB-1117-02			RAPA	<0.0001	<0.0001		<0.002	<0.0001	<0.0002		<0.0001			
EB-1117-03			RAPA	<0.0001	<0.0001		<0.002	<0.0001	<0.0002		<0.0001			
EB-1117-04			RAPA	<0.0001	<0.0001		<0.002	<0.0001	<0.0002		<0.0001			
EC 30			RAR App F-2	ND	ND		87	2.5	28		4.9			
EC 43-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 43-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 44-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 44-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 45-1			RAR App F-2	1.5	ND		41	2.2	26		1.6			
EC 45-2			RAR App F-2	1.3	ND		26	1.6	16		1.2			
EC 46-1			RAR App F-2	1.8	ND		70	2.3	33 (4)		1.1			
EC 46-2			RAR App F-2	ND	ND		45	1.3	21		ND			
EC 47-1			RAR App F-2	ND	ND		72	ND	49		ND			
EC 47-2			RAR App F-2	ND	ND		41	2.1	26		ND			
EC 48-1			RAR App F-2	5.5	ND		130	7.2	81 (6)		10			
EC 48-2			RAR App F-2	5.8	ND		120	7.4	81 (6)		12			
EC 49-1			RAR App F-2	6	ND		110	8.6	89 (6)		7.7			
EC 49-2			RAR App F-2	8.5	2.3		130	13	110 (6)		12			
EC 50-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 50-2			RAR App F-2	ND	ND		4	ND	ND		ND			
EC 51-1			RAR App F-2	ND	ND		100	ND	45		8.2			
EC 51-2			RAR App F-2	ND	ND		65	ND	30		5.4			
EC 52-1			RAR App F-2	6.5	ND		190	9.5	92		14			
EC 52-2			RAR App F-2	ND	ND		14	ND	7.5		ND			
EC 53-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 53-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 54-1			RAR App F-2	ND	ND		2.3	ND	ND		ND			
EC 54-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 58			RAR App F-2	ND	ND		6.3	ND	8.4		ND			
EC 60-1			RAR App F-2	ND	ND		180	8.2	94		ND			
EC 60-2			RAR App F-2	ND	ND		270	12	130		ND			
EC 61			RAR App F-2	ND	ND		24	ND	13		ND			
EC 61-1			RAR App F-2	ND	ND		200	ND	110		ND			
EC 61-2			RAR App F-2	ND	ND		210	ND	120		ND			
EC 62-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 62-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
EC 64			RAR App F-2	ND	ND		40	ND	6		ND			
EC 68			RAR App F-2	ND	ND		69	ND	7.5		ND			
FB-117-01			RAPA	<0.00005	<0.00005		<0.001	<0.00005	<0.0001		<0.00005			
FM-1			RI	1	1		1		1		1			
FM-2			RI	1	1		1		1		1			
PSLAB-1			RI	1	1		2.1		3.5		1			
PSLAB-10			RI	130	21		21		15		10			
PSLAB-11			RI	1	1		6.5		1.4		1			
PSLAB-12			RI	1	1		1		1		1			
PSLAB-13			RI	1	1		2.3		1		1			
PSLAB-14			RI	1	1		21		1		1			
PSLAB-15			RI	1	1		1		1		1			
PSLAB-16			RI	1	1		1		1		1			
PSLAB-2			RI	1	1		1.9		1		1			
PSLAB-3			RI	1	1		2.4		1		1			
PSLAB-4			RI	1	1		1		1		1			
PSLAB-5			RI	1	1		1		1		1			
PSLAB-6			RI	1	1		17		2.2		1			
PSLAB-7			RI	1	1		3.5		1.6		1			
PSLAB-8			RI	1	1		7.9		2.1		1			
PSLAB-9			RI	1	1		7		1		1			
RA 1-1			RAR App F-2	ND	ND		3.8	ND	ND		ND			
RA 10-1			RAR App F-2	33	ND		720	CBI	280*		ND			
RA 10-2			RAR App F-2	ND	ND		84	ND	17		ND			
RA 100-2			RAR App F-2	ND	ND		52	ND	3.3		ND			
RA 100-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 101-2			RAR App F-2	ND	ND		56	ND	ND		ND			
RA 102-1			RAR App F-2	ND	ND		44	CBI	12		ND			

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RA 102-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 103-1			RAR App F-2	ND	ND		27	ND	5.5		ND			
RA 103-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 104-1			RAR App F-2	ND	ND		52	ND	6.6		ND			
RA 108-1			RAR App F-2	ND	ND		6.2	ND	ND		ND			
RA 109-1			RAR App F-2	ND	ND		1.7	ND	1.5		ND			
RA 109-2			RAR App F-2	ND	ND		18	ND	ND		ND			
RA 11-1			RAR App F-2	ND	ND		57	ND	ND		ND			
RA 112-2			RAR App F-2	ND	ND		20	ND	1.4		ND			
RA 113-2			RAR App F-2	ND	ND		17	ND	3.5		ND			
RA 114-4			RAR App F-2	5.0	1.4		97	4	31*		2.4			
RA 115-4			RAR App F-2	ND	ND		94	ND	99		ND			
RA 116-4			RAR App F-2	ND	ND		140	11	110		ND			
RA 116-5			RAR App F-2	13	ND		360	20	180		13			
RA 117-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 118-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 119-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 12-1			RAR App F-2	ND	ND		94	ND	CBI		ND			
RA 120-4			RAR App F-2	ND	ND		81	ND	26		ND			
RA 121-4			RAR App F-2	ND	ND		100	ND	40		ND			
RA 122-4			RAR App F-2	ND	ND		250	ND	140		12			
RA 123-4			RAR App F-2	18	ND		210	21	160		27			
RA 124-4			RAR App F-2	ND	ND		20	ND	16		ND			
RA 126-4			RAR App F-2	ND	ND		23	ND	ND		ND			
RA 127-4			RAR App F-2	ND	ND		190	ND	95		ND			
RA 128-4			RAR App F-2	ND	ND		240	ND	76		ND			
RA 129-4			RAR App F-2	ND	ND		39	ND	ND		ND			
RA 13-1			RAR App F-2	ND	ND		130*	ND	CBI		ND			
RA 13-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 130-4			RAR App F-2	ND	ND		450	15	76		ND			
RA 131-4			RAR App F-2	14	ND		820	31	230*		32			
RA 132-4			RAR App F-2	ND	ND		380	18	140		18			
RA 133-4			RAR App F-2	ND	ND		34	ND	ND		ND			
RA 134-4			RAR App F-2	ND	ND		19	ND	ND		ND			
RA 135-4			RAR App F-2	ND	ND		290	CBI	100		ND			
RA 137-2			RAR App F-2	ND	ND		22	ND	1.9		ND			
RA 138-2			RAR App F-2	ND	ND		25	ND	ND		ND			
RA 139-2			RAR App F-2	ND	ND		32	ND	ND		ND			
RA 14-1			RAR App F-2	ND	ND		2.6	ND	ND		ND			
RA 140-2			RAR App F-2	ND	ND		16	ND	ND		ND			
RA 141-2			RAR App F-2	ND	ND		15	ND	5.6		ND			
RA 142-2			RAR App F-2	ND	ND		7.3	ND	4.8		ND			
RA 143-2			RAR App F-2	ND	ND		19	ND	3.7		ND			
RA 144-2			RAR App F-2	ND	ND		8.5	ND	ND		ND			
RA 145-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 146-1			RAR App F-2	1.4	ND		ND	ND	ND		ND			
RA 147-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 148-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 149-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 15-1			RAR App F-2	ND	ND		9.3	ND	ND		ND			
RA 15-2			RAR App F-2	ND	ND		8.8	ND	ND		ND			
RA 15-3			RAR App F-2	ND	ND		3.8	ND	2.9		ND			
RA 15-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 150-6			RAR App F-2	3.8	1.2		82	ND	61 (2)		4.1			
RA 151-6			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 153-1			RAR App F-2	ND	ND		41	ND	13		ND			
RA 154-1			RAR App F-2	ND	ND		1.5	ND	ND		ND			
RA 155-2			RAR App F-2	ND	ND		19	ND	1.3		ND			
RA 156-2			RAR App F-2	ND	ND		34	ND	4.1		ND			
RA 157-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 158-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 16-1			RAR App F-2	ND	ND		70	ND	CBI		ND			
RA 16-2			RAR App F-2	ND	ND		220	ND	24		ND			
RA 16-3			RAR App F-2	ND	ND		130	ND	59		ND			
RA 16-4			RAR App F-2	ND	ND		210	ND	130		ND			
RA 16-5			RAR App F-2	ND	ND		350	ND	160		ND			
RA 17-1			RAR App F-2	ND	ND		130*	ND	9.9		ND			
RA 17-2			RAR App F-2	ND	ND		22	ND	ND		ND			
RA 17-3			RAR App F-2	ND	ND		2.5	ND	ND		ND			
RA 17-4			RAR App F-2	1.9	ND		120*	6 1	23*		ND			
RA 18-1			RAR App F-2	ND	ND		68	ND	14		ND			
RA 18-2			RAR App F-2	ND	ND		100	ND	62		ND			
RA 18-3			RAR App F-2	ND	ND		70	ND	38		ND			
RA 18-4			RAR App F-2	2.4	ND		55	2.9	34*		2.0			
RA 18-5			RAR App F-2	ND	ND		ND	ND	ND		ND			

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RA 19-1			RAR App F-2	ND	ND		2000	ND	160		ND			
RA 19-2			RAR App F-2	ND	ND		53	1.7	88 (2)		ND			
RA 19-3			RAR App F-2	ND	ND		40	ND	81		ND			
RA 19-4			RAR App F-2	ND	ND		100	ND	110		ND			
RA 19-5			RAR App F-2	ND	ND		100	ND	100		ND			
RA 2-1			RAR App F-2	ND	ND		58	ND	ND		ND			
RA 20-1			RAR App F-2	ND	ND		94	CBI	5.0		ND			
RA 20-4			RAR App F-2	ND	ND		110	ND	51		ND			
RA 20-5			RAR App F-2	ND	ND		280	ND	110		ND			
RA 21-1			RAR App F-2	ND	ND		22	ND	2.0		ND			
RA 21-2			RAR App F-2	ND	ND		5.7	ND	1.7		ND			
RA 21-3			RAR App F-2	ND	ND		2.0	ND	ND		ND			
RA 21-4			RAR App F-2	14	ND		1500*	ND	270		17			
RA 21-5			RAR App F-2	14	ND		820	20	340		14			
RA 22-1			RAR App F-2	ND	ND		20	ND	2.3		ND			
RA 22-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 22-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 22-4			RAR App F-2	ND	ND		180	ND	26		ND			
RA 23-1			RAR App F-2	ND	ND		41	ND	ND		ND			
RA 23-2			RAR App F-2	ND	ND		44	ND	6.4		ND			
RA 23-3			RAR App F-2	ND	ND		25	ND	3.7		ND			
RA 23-4			RAR App F-2	ND	ND		50	ND	28		ND			
RA 24-1			RAR App F-2	ND	ND		2.9	ND	ND		ND			
RA 24-2			RAR App F-2	ND	ND		7.9	ND	ND		ND			
RA 24-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 24-4			RAR App F-2	ND	ND		290	11	110		11			
RA 24-5			RAR App F-2	18	ND		480	24	270		24			
RA 25-1			RAR App F-2	ND	ND		100	ND	7.9		ND			
RA 25-2			RAR App F-2	ND	ND		110	ND	33		ND			
RA 25-3			RAR App F-2	31	ND		440	40	240		31			
RA 25-4			RAR App F-2	ND	ND		330	ND	79		ND			
RA 25-5			RAR App F-2	ND	ND		450	16	140		12			
RA 26-1			RAR App F-2	ND	ND		41	ND	24		ND			
RA 26-2			RAR App F-2	ND	ND		58	ND	36		ND			
RA 26-3			RAR App F-2	ND	ND		32	1.1	20		ND			
RA 26-4			RAR App F-2	ND	ND		57	ND	54		ND			
RA 26-5			RAR App F-2	ND	ND		89	ND	66		ND			
RA 27-1			RAR App F-2	ND	ND		45	2.4	17		ND			
RA 27-2			RAR App F-2	ND	ND		55	ND	50		ND			
RA 27-3			RAR App F-2	ND	ND		43	ND	35		ND			
RA 27-4			RAR App F-2	ND	ND		70	ND	24		ND			
RA 28-1			RAR App F-2	1.6	ND		96	CBI	43*		ND			
RA 28-2			RAR App F-2	ND	ND		170	ND	45		ND			
RA 28-3			RAR App F-2	ND	ND		250	13	89		ND			
RA 28-4			RAR App F-2	ND	ND		220	ND	86		ND			
RA 29-1			RAR App F-2	ND	ND		200	ND	22		ND			
RA 29-2			RAR App F-2	ND	ND		280	12	65		ND			
RA 29-4			RAR App F-2	ND	ND		200	ND	79		ND			
RA 3-1			RAR App F-2	ND	ND		110	CBI	3.7		ND			
RA 30-1			RAR App F-2	ND	ND		6.4	ND	ND		ND			
RA 31-1			RAR App F-2	ND	ND		20	ND	2.3		ND			
RA 32-1			RAR App F-2	ND	ND		1.3	ND	ND		ND			
RA 33-1			RAR App F-2	ND	ND		50	ND	ND		ND			
RA 33-2			RAR App F-2	ND	ND		31	ND	CBI		ND			
RA 34-1			RAR App F-2	ND	ND		37	ND	4.1		ND			
RA 35-1			RAR App F-2	ND	ND		1.9	ND	ND		ND			
RA 36-1			RAR App F-2	ND	ND		60	ND	CBI		ND			
RA 36-2			RAR App F-2	ND	ND		76	ND	16		ND			
RA 37-1			RAR App F-2	ND	ND		11	ND	ND		ND			
RA 37-2			RAR App F-2	ND	ND		13	ND	1.6		ND			
RA 38-1			RAR App F-2	ND	ND		29	ND	CBI		ND			
RA 38-2			RAR App F-2	ND	ND		15	ND	ND		ND			
RA 39-1			RAR App F-2	ND	ND		21	ND	CBI		ND			
RA 39-2			RAR App F-2	ND	ND		18	ND	3.4		ND			
RA 4-1			RAR App F-2	ND	ND		96	ND	ND		ND			
RA 40-1			RAR App F-2	ND	ND		140*	ND	CBI		ND			
RA 40-2			RAR App F-2	ND	ND		77	ND	ND		ND			
RA 41-1			RAR App F-2	ND	ND		15	ND	1.0		ND			
RA 42-1			RAR App F-2	ND	ND		1.5	ND	ND		ND			
RA 43-1			RAR App F-2	ND	ND		59	CBI	12		ND			
RA 44-1			RAR App F-2	ND	ND		79	ND	5.2		ND			
RA 45-1			RAR App F-2	ND	ND		54	ND	5.7		ND			
RA 46-1			RAR App F-2	ND	ND		20	ND	2.4		ND			
RA 46-2			RAR App F-2	ND	ND		21	ND	2.1		ND			
RA 47-1			RAR App F-2	ND	ND		12	ND	ND		ND			

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RA 48-1			RAR App F-2	ND	ND		3.4	ND	ND		ND			
RA 49-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 5-1			RAR App F-2	ND	ND		430	ND	CBI		ND			
RA 50-1			RAR App F-2	ND	ND		28	ND	CBI		ND			
RA 51-1			RAR App F-2	ND	ND		1.5	ND	ND		ND			
RA 52-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 53-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 54-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 55-1			RAR App F-2	ND	ND		75	ND	CBI		ND			
RA 55-2			RAR App F-2	ND	ND		140	ND	4.7		ND			
RA 56-1			RAR App F-2	ND	ND		49	ND	CBI		ND			
RA 56-2			RAR App F-2	ND	ND		140	ND	4.4		ND			
RA 57-1			RAR App F-2	ND	ND		130*	ND	CBI		ND			
RA 58-1			RAR App F-2	ND	ND		370	ND	ND		ND			
RA 59-1			RAR App F-2	ND	ND		54	ND	7.9		ND			
RA 6-1			RAR App F-2	ND	ND		19	ND	ND		ND			
RA 60-1			RAR App F-2	ND	ND		32	ND	8.6		ND			
RA 61-1			RAR App F-2	ND	ND		30	ND	3.7		ND			
RA 62-1			RAR App F-2	ND	ND		37	ND	2.2		ND			
RA 62-2			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 63-1			RAR App F-2	ND	ND		6.0	ND	1.8		ND			
RA 63-2			RAR App F-2	ND	ND		2.3	ND	1.1		ND			
RA 64-1			RAR App F-2	ND	ND		50	ND	CBI		ND			
RA 64-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 65-1			RAR App F-2	ND	ND		80	ND	2.0		ND			
RA 65-2			RAR App F-2	ND	ND		34	ND	ND		ND			
RA 65-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 66-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 67-1			RAR App F-2	ND	ND		26	ND	ND		ND			
RA 68-1			RAR App F-2	ND	ND		11	ND	ND		ND			
RA 69-1			RAR App F-2	ND	ND		880	ND	16		ND			
RA 69-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 7-1			RAR App F-2	ND	ND		620	ND	82		ND			
RA 7-2			RAR App F-2	ND	ND		56	ND	13		ND			
RA 70-1			RAR App F-2	ND	ND		62	ND	4.0		ND			
RA 71-1			RAR App F-2	ND	ND		9.2	ND	ND		ND			
RA 72-1			RAR App F-2	ND	ND		1.3	ND	ND		ND			
RA 73-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 74-1			RAR App F-2	ND	ND		3.9	ND	ND		ND			
RA 76-1			RAR App F-2	ND	ND		4.4	ND	ND		ND			
RA 77-1			RAR App F-2	ND	ND		1.3	ND	ND		ND			
RA 78-1			RAR App F-2	ND	ND		7.7	ND	ND		ND			
RA 79-1			RAR App F-2	ND	ND		25	ND	ND		ND			
RA 8-1			RAR App F-2	ND	ND		190	ND	57		ND			
RA 8-2			RAR App F-2	ND	ND		120	ND	1.7		ND			
RA 80-1			RAR App F-2	ND	ND		2.0	ND	ND		ND			
RA 81-1			RAR App F-2	ND	ND		26	ND	ND		ND			
RA 82-1			RAR App F-2	ND	ND		160*	ND	1.9		ND			
RA 82-2			RAR App F-2	ND	ND		28	ND	4.2		ND			
RA 83-3			RAR App F-2	1.9	ND		65	CBI	27*		3.4			
RA 83-4			RAR App F-2	ND	ND		52	ND	18		ND			
RA 83-5			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 84-2			RAR App F-2	ND	ND		130	ND	43		ND			
RA 84-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 84-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 84-5			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 85-2			RAR App F-2	ND	ND		1.7	ND	ND		1.7			
RA 85-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 85-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 86-2			RAR App F-2	ND	ND		46	ND	ND		ND			
RA 86-3			RAR App F-2	1.5	ND		79	3.1	38		2.2			
RA 87-2			RAR App F-2	ND	ND		290	ND	100		ND			
RA 87-3			RAR App F-2	ND	ND		33	ND	10		ND			
RA 88-2			RAR App F-2	ND	ND		110	ND	36		ND			
RA 88-4			RAR App F-2	ND	ND		2.3	ND	2.1		ND			
RA 9-1			RAR App F-2	24	ND		450	CBI	210		ND			
RA 90-2			RAR App F-2	ND	ND		28	ND	ND		ND			
RA 90-3			RAR App F-2	ND	ND		120*	ND	1.9		ND			
RA 90-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RA 91-2			RAR App F-2	ND	1.6		51	ND	16		ND			
RA 91-3			RAR App F-2	ND	ND		1.4	ND	ND		ND			
RA 92-2			RAR App F-2	ND	ND		81	ND	58		ND			
RA 92-3			RAR App F-2	ND	ND		24	ND	32		ND			
RA 93-2			RAR App F-2	ND	ND		7900	CBI	ND		ND			
RA 93-3			RAR App F-2	ND	ND		100	ND	44		ND			

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RA 93-4			RAR App F-2	ND	ND		210	ND	71		ND			
RA 93-5			RAR App F-2	ND	ND		380	19	170		14			
RA 94-2			RAR App F-2	ND	ND		140	ND	1100		ND			
RA 94-3			RAR App F-2	ND	ND		1400	ND	ND		ND			
RA 96-2			RAR App F-2	ND	ND		46	ND	16		ND			
RA 97-2			RAR App F-2	ND	ND		190	ND	18		ND			
RA 97-4			RAR App F-2	ND	ND		240	ND	94		ND			
RA 98-2			RAR App F-2	ND	ND		86	ND	8.3		ND			
RA 98-4			RAR App F-2	ND	ND		260	ND	100		ND			
RA 99-2			RAR App F-2	ND	ND		46	ND	13		ND			
RA 99-4			RAR App F-2	ND	ND		230	ND	61		ND			
RAP-02	2-4		RAP						nd					
RAP-02	4-6		RAP						nd					
RAP-03	2-4		RAP						nd					
RAP-03	4-6		RAP						nd					
RAP-04	2-4		RAP						nd					
RAP-04	4-6		RAP						nd					
RAP-05	2-4		RAP						12					
RAP-05	4-6		RAP						nd					
RAP-06	2-4		RAP						50					
RAP-06	4-6		RAP						56					
RAP-06	6-8		RAP						58					
RAP-06	8-10		RAP						30					
RAP-07	2-4		RAP						32					
RAP-07	4-6		RAP						20					
RAP-07	8-10		RAP						14					
RAP-08	2-4		RAP						nd					
RAP-08	2-4	08dup	RAP						nd					
RAP-08	4-6		RAP						nd					
RAP-09	2-4		RAP						nd					
RAP-09	4-6		RAP						nd					
RAP-10	2-4		RAP						nd					
RAP-10	4-6		RAP						nd					
RAP-11	2-4		RAP						nd					
RAP-11	4-6		RAP						nd					
RAP-12	2-4		RAP						nd					
RAP-12	4-6		RAP						nd					
RAP-13	2-4		RAP						nd					
RAP-13	4-6		RAP						nd					
RAP-14	2-4		RAP						nd					
RAP-14	4-6		RAP						nd					
RAP-15	2-4		RAP						29					
RAP-15	4-6		RAP						nd					
RAP-16	2-4		RAP						110					
RAP-16	4-6		RAP						56					
RAP-16	6-8		RAP						56					
RAP-16	8-10		RAP						34					
RAP-17	2-4		RAP						28					
RAP-17	4-6		RAP						290					
RAP-17	6-8		RAP						150					
RAP-18	2-4		RAP						nd					
RAP-18	4-6		RAP						60					
RAP-18	6-8		RAP						12					
RAP-18	8-10		RAP						19					
RAP-19	2-4		RAP						nd					
RAP-19	4-6		RAP						nd					
RAP-19	6-8		RAP						nd					
RAP-20	2-4		RAP						nd					
RAP-20	4-6		RAP						nd					
RAP-20	6-8		RAP						nd					
RAP-21	2-4		RAP						nd					
RAP-21	4-6		RAP						nd					
RAP-21	6-8		RAP						nd					
RAP-24	2-4		RAP						nd					
RAP-24	4-6		RAP						23					
RAP-24	6-8		RAP						nd					
RAP-25	2-4		RAP						nd					
RAP-25	2-4	25dup	RAP						nd					
RAP-25	4-6		RAP						nd					
RAP-26	2-4		RAP						nd					
RAP-26	4-6		RAP						nd					
RAP-27	2-4		RAP						45					
RAP-27	4-6		RAP						53					
RAP-27	6-8		RAP						15					
RAP-27	8-10		RAP						25					

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RAP-28	2-4		RAP						nd					
RAP-28	2-4	28dup	RAP						nd					
RAP-28	4-6		RAP						220					
RAP-28	6-8		RAP						220					
RAP-28	8-10		RAP						260					
RAP-29	2-4		RAP						100					
RAP-29	4-6		RAP						89					
RAP-29	6-8		RAP						59					
RAP-29	8-10		RAP						17					
RAP-30	2-4		RAP						36					
RAP-30	4-6		RAP						55					
RAP-30	6-8		RAP						32					
RAP-31	2-4		RAP						nd					
RAP-31	2-4	31dup	RAP						nd					
RAP-31	4-6		RAP						nd					
RAP-32	2-4		RAP						nd					
RAP-32	4-6		RAP						nd					
RAP-33	2-4		RAP						nd					
RAP-33	4-6		RAP						nd					
RAP-33	6-8		RAP						nd					
RAP-34	2-4		RAP						nd					
RAP-34	4-6		RAP						nd					
RAP-35	2-4		RAP						nd					
RAP-35	2-4	35dup	RAP						nd					
RAP-35	4-6		RAP						nd					
RAP-36	2-4		RAP						nd					
RAP-36	4-6		RAP						nd					
RAP-37	2-4		RAP						38					
RAP-37	4-6		RAP						63					
RAP-37	6-8		RAP						nd					
RAP-37	8-10		RAP						34					
RAP-38	2-4		RAP						nd					
RAP-38	4-6		RAP						12					
RAP-38	6-8		RAP						28					
RAP-38	8-10		RAP						nd					
RAP-39	2-4		RAP						130					
RAP-39	4-6		RAP						140					
RAP-39	6-8		RAP						160					
RAP-39	8-10		RAP						150					
RAP-40	2-4		RAP						nd					
RAP-40	4-6		RAP						nd					
RAP-41	2-4		RAP						14					
RAP-41	4-6		RAP						nd					
RAP-42	2-4		RAP						nd					
RAP-42	4-6		RAP						nd					
RAP-43	2-4		RAP						nd					
RAP-43	4-6		RAP						nd					
RAP-44	2-4		RAP						nd					
RAP-44	4-6		RAP						nd					
RAP-45	2-4		RAP						nd					
RAP-45	4-6		RAP						nd					
RAP-46	2-4		RAP						nd					
RAP-46	4-6		RAP						nd					
RAP-47	2-4		RAP						nd					
RAP-47	4-6		RAP						nd					
RAP-48	2-4		RAP						nd					
RAP-48	4-6		RAP						nd					
RAP-49	2-4		RAP						nd					
RAP-49	4-6		RAP						nd					
RAP-50	2-4		RAP						nd					
RAP-50	4-6		RAP						nd					
RAP-51	2-4		RAP						nd					
RAP-51	4-6		RAP						nd					
RAP-52	2-4		RAP						nd					
RAP-52	4-6		RAP						nd					
RAP-53	2-4		RAP						nd					
RAP-53	2-4	53dup	RAP						nd					
RAP-53	4-6		RAP						nd					
RAP-54	2-4		RAP						nd					
RAP-54	4-6		RAP						nd					
RAP-55	2-4		RAP						nd					
RAP-55	4-6		RAP						nd					
RAP-56	2-4		RAP						nd					
RAP-56	4-6		RAP						nd					
RAP-57	2-4		RAP						nd					

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RAP-57	4-6		RAP						nd					
RAP-58	2-4		RAP						nd					
RAP-58	2-4	58dup	RAP						nd					
RAP-58	4-6		RAP						nd					
RAP-59	2-4		RAP						nd					
RAP-59	2-4	59dup	RAP						nd					
RAP-59	4-6		RAP						32					
RAP-59	6-8		RAP						46					
RAP-59	8-10		RAP						nd					
RAP-60	2-4		RAP						nd					
RAP-60	4-6		RAP						nd					
RAP-60	6-8		RAP						nd					
RAP-61	2-4		RAP						nd					
RAP-61	2-4	61dup	RAP						nd					
RAP-61	4-6		RAP						nd					
RAP-62	2-4		RAP						nd					
RAP-62	4-6		RAP						nd					
RAP-A	1-2		RAP	nd	nd		230	nd	nd		nd			
RAP-B	1-2		RAP	nd	nd		3	nd	nd		nd			
RAP-C	1-2		RAP	nd	nd		160	nd	nd		nd			
RAP-D	1-2		RAP	nd	nd		150	nd	nd		nd			
RAP-E	2-4		RAP						nd					
RAP-G	2-4		RAP						32					
RAP-H	2-4		RAP						nd					
RT 1			RAR App F-2	ND	ND		84	ND	CBI		ND			
RT 10			RAR App F-2	ND	ND		230	ND	110		ND			
RT 10-2			RAR App F-2	ND	1.1		84	ND	12		ND			
RT 11			RAR App F-2	ND	ND		490	ND	160		ND			
RT 11-2			RAR App F-2	ND	2.3		21	3.7	6.2		ND			
RT 12-1			RAR App F-2	ND	17		700	18	49*		ND			
RT 12-2			RAR App F-2	ND	ND		74	ND	47		ND			
RT 13			RAR App F-2	88	20		400	140	940 (3)		21			
RT 13-2			RAR App F-2	ND	ND		46	ND	68		ND			
RT 14-1			RAR App F-2	ND	ND		87	ND	120		ND			
RT 14-2			RAR App F-2	ND	ND		16	ND	25		ND			
RT 15			RAR App F-2	35	ND		350	ND	330*		ND			
RT 15-2			RAR App F-2	ND	ND		54	ND	53		ND			
RT 16-1			RAR App F-2	ND	ND		23	ND	140 (2)		ND			
RT 17-1			RAR App F-2	5.9	1.6		43	ND	23*		ND			
RT 18-1			RAR App F-2	ND	ND		15	ND	4.7		ND			
RT 19-1			RAR App F-2	ND	ND		37	ND	21		ND			
RT 2			RAR App F-2	ND	ND		16	ND	CBI		ND			
RT 20-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 22-2			RAR App F-2	ND	ND		17	ND	2.7		ND			
RT 22-3			RAR App F-2	ND	ND		380	ND	370		ND			
RT 22-4			RAR App F-2	ND	ND		44	ND	91		ND			
RT 22-5			RAR App F-2	ND	ND		55	ND	89		ND			
RT 22-6			RAR App F-2	21	ND		120	11	210		19			
RT 23-2			RAR App F-2	ND	ND		71	ND	73		ND			
RT 23-3			RAR App F-2	ND	ND		45	ND	27		ND			
RT 23-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 23-5			RAR App F-2	ND	ND		ND	ND	44		ND			
RT 23-6			RAR App F-2	ND	ND		16	ND	69		ND			
RT 24-2			RAR App F-2	ND	ND		110	ND	76		ND			
RT 24-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 24-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 25-2			RAR App F-2	ND	ND		4.4	ND	7		ND			
RT 26-2			RAR App F-2	ND	ND		5.7	ND	1.2		ND			
RT 27-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 27-4			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 28-3			RAR App F-2	ND	ND		18	ND	42*		ND			
RT 28-4			RAR App F-2	ND	ND		4	ND	16		ND			
RT 28-5			RAR App F-2	ND	ND		18	ND	49		ND			
RT 29-3			RAR App F-2	ND	1.6		5.6	1.5	12		ND			
RT 29-4			RAR App F-2	4.2	3.4		24	5.6	40*		1.1			
RT 3			RAR App F-2	ND	ND		83	ND	ND		ND			
RT 30-3			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 30-4			RAR App F-2	ND	ND		1.2	ND	ND		ND			
RT 30-5			RAR App F-2	ND	ND		1.6	ND	ND		ND			
RT 30-6			RAR App F-2	ND	ND		ND	ND	ND		ND			
RT 31-3			RAR App F-2	ND	ND		100	ND	78		ND			
RT 31-4			RAR App F-2	ND	ND		68	ND	140		ND			
RT 31-5			RAR App F-2	ND	ND		48	ND	120		ND			
RT 31-6			RAR App F-2	3.3	ND		39	3.1	85 (2)		4.7			
RT 32-7			RAR App F-2	ND	ND		1.2	ND	1.2		ND			

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
RT 33-7			RAR App F-2	9.9	2.1		18	1.7	21		ND			
RT 34-7			RAR App F-2	11	3.3		57	7.7	130 (2)		9.4			
RT 4			RAR App F-2	ND	ND		2.1	ND	ND		ND			
RT 5-1			RAR App F-2	ND	ND		3.4	ND	ND		ND			
RT 6			RAR App F-2	NA	NA		NA	NA	NA		NA			
RT 7			RAR App F-2	ND	44		540	ND	130		ND			
RT 8			RAR App F-2	ND	3.1		59	ND	10		ND			
RT 9			RAR App F-2	ND	CBI		530	ND	130		ND			
RT 9-2			RAR App F-2	ND	ND		350	16	270		ND			
RT HP			RAR App F-2	ND	ND		130	ND	110		ND			
SA FILL-1			RI	1	1		2.1		1		1			
SASG-3			RI	0.5	0.5		0.5		0.5		0.5			
SB-01	0 - 0.5		CAR	0.42	11		8.2	10	2.2	BDL	0.55			BDL
SB-02	0 - 0.5		CAR	BDL	1.7		13	2.5	1.4	BDL	BDL			57
SB-04	0 - 0.5		CAR	2100	48		1400	130	490	0.0077	76			0.0077
SB-04	1.5 - 2		CAR	*	*		*	*	56	1.5	*			1.1
SB-05	0 - 0.5		CAR	*	*		18	*	15	BDL	*			BDL
SB-05	1.5 - 2		CAR	BDL	BDL		BDL	BDL	BDL	BDL	BDL			BDL
SB-06	0 - 0.5		CAR	*	*		*	*	18	BDL	*			BDL
SB-07	0 - 0.5		CAR	72	81		160	320	1600	BDL	*			BDL
SB-08	0 - 0.5		CAR	*	*		5.1	*	*	BDL	*			BDL
SB-09	1.5-2.0		CAR				NA		*	BDL			BDL	BDL
SB-10	1.5-2.0		CAR				1.3		BDL	0.051			0.081	0.13
SB-11	1.5-2.0		CAR				*		*	0.39			BDL	3.3
SB-12	1.5-2.0		CAR				4.6		BDL	NA			NA	NA
SB-13	1.5-2.0		CAR				73		BDL	NA			NA	NA
SB-14	1.5-2.0		CAR				BDL		BDL	NA			NA	NA
SB-15	1.5-2.0		CAR				BDL		BDL	NA			NA	NA
SB-16	1.5-2.0		CAR				1100		*	NA			NA	NA
SB-17	4.5-5.0		CAR				*		68	2.3			0.48	1.6
SB-17	7.5-8.0		CAR				*		48	0.36			0.22	4.2
SB-18	4.5-5.0		CAR				26		17	2.1			BDL	10
SB-18	7.5-8.0		CAR				*		21	0.51			BDL	3.5
SB-19	4.5-5.0		CAR				170		180	BDL			0.69	19
SB-20	4.5-5.0		CAR				*		*	BDL			BDL	0.026
SB-21	4.5-5.0		CAR				*		51	1.5			0.72	6.2
SB-22	4.5-5.0		CAR				170		*	2.2			0.38	190
SB-22	7.5-8.0		CAR				250		40	64			0.49	470
SB-23	4.5-5.0		CAR				*		120	14			0.62	100
SB-23	7.5-8.0		CAR				470		92	*			*	1900
SB-24	1.5-2.0		CAR				760		*	NA			NA	NA
SB-25	1.5-2.0		CAR				100		*	NA			NA	NA
SB-26	1.5-2.0		CAR				87		*	1.4			0.93	14
SB-26	1.5-2.0	DUP-26	CAR				*		51	NA			NA	NA
SB-27	4.5-5.0		CAR				NA		NA	NA			NA	NA
SB-28	1.5-2.0		CAR				13		BDL	NA			NA	NA
SB-29	4.5-5.0		CAR				BDL		BDL	BDL			BDL	BDL
SB-29	4.5-5.0	DUP-29	CAR				BDL		BDL	BDL			BDL	0.024
SB-30	1.5-2.0		CAR				BDL		BDL	NA			NA	NA
SB-31	4.5-5.0		CAR				BDL		BDL	BDL			BDL	0.056
SB-35	0 - 0.5		CAR	BDL	BDL		43	BDL	BDL	BDL	BDL			BDL
SP-1			RAR App F-2	ND	ND		ND	ND	ND		ND			
SP-10			RAR App F-2	ND	ND		61	ND	39		ND			
SP-11			RAR App F-2	ND	ND		1.3	ND	ND		ND			
SP-12			RAR App F-2	ND	ND		34	2.1	51 (2)		ND			
SP-13			RAR App F-2	ND	ND		400	23	180		ND			
SP-14			RAR App F-2	ND	ND		400	ND	97		ND			
SP-15			RAR App F-2	ND	ND		170	ND	80		ND			
SP-16			RAR App F-2	ND	ND		460	ND	140		ND			
SP-17			RAR App F-2	ND	ND		13	ND	ND		ND			
SP-18			RAR App F-2	ND	ND		150	ND	110		ND			
SP-19			RAR App F-2	2.5	ND		34	2.5	13		ND			
SP-2			RAR App F-2	ND	ND		120	ND	82		ND			
SP-20			RAR App F-2	ND	ND		73	ND	56		ND			
SP-21			RAR App F-2	1.4	ND		46	1.8	25		ND			
SP-22			RAR App F-2	4.1	1.1		67	5.6	42*		5.9			
SP-3			RAR App F-2	ND	ND		73	ND	50		ND			
SP-4			RAR App F-2	ND	ND		8.7	ND	5		ND			
SP-5			RAR App F-2	1.2	ND		73	2.7	19		1.5			
SP-6			RAR App F-2	3.5	3.6		55	4.6	35*		3.6			
SP-7			RAR App F-2	ND	ND		190	ND	69		ND			
SP-8			RAR App F-2	23	ND		230	ND	180		37			
SP-9			RAR App F-2	ND	ND		ND	ND	ND		ND			
SS-BTP-922			RAPA	<0.004	<0.004	<0.005	<0.008	<0.004	<0.005	<0.005	<0.004	<0.005	0.0075	<0.005
SS-SND-922			RAPA	<0.004	<0.004	<0.005	<0.008	<0.004	<0.005	<0.005	<0.004	<0.005	<0.005	<0.005

Appendix D
Compilation of Soil Data

Sample ID	Depth ft	Duplicate	Report	a-BHC mg/kg	b-BHC mg/kg	Benzene mg/kg	Chlordane mg/kg	d-BHC mg/kg	DDD mg/kg	Ethylbenzene mg/kg	g-BHC mg/kg	MTBE mg/kg	Toluene mg/kg	Xylenes mg/kg
TP-SS-01	0-0.25		RI	<0.004	<0.004		21(1)	<0.004	<0.005		<0.004			
TP-SS-02	0-0.25		RI	<0.004	<0.004		3(1)	<0.004	<0.005		<0.004			
TP-SS-03	0-0.25		RI	<0.004	<0.004		2.7(1)	<0.004	<0.005		<0.004			
TP-SS-04	0-0.25		RI	<0.004	<0.004		0.2(1)	<0.004	<0.005		<0.004			
TP-SS-05	0-0.25		RI	<0.004	<0.004		0.29(1)	<0.004	<0.005		<0.004			
TP-SS-06	0-0.25		RI	<0.004	<0.004		0.72(1)	<0.004	0.01(1)		<0.004			
TP-SS-07	0-0.25		RI	<0.004	<0.004		0.086	<0.004	<0.005		<0.004			
TP-SS-07	0-0.25	TP-SS-107	RI	<0.004	<0.004		0.047(1)	<0.004	<0.005		<0.004			
TP-SS-08	0-0.25		RI	<0.004	<0.004		3.1(1)		0.01(1)		<0.004			
TP-SS-09	0-0.25		RI	<0.004	<0.004		0.48(1)	<0.004	<0.005		<0.004			
TP-SS-09	0-0.25	TP-SS-109	RI	<0.004	<0.004		0.36(1)	<0.004	<0.005		<0.004			
TP-SS-10	0-0.25		RI	<0.004	<0.004		0.62(1)	<0.004	<0.005		<0.004			
TP-SS-11	0-0.25		RI	<2	<2		23(2)	<2	<2.5		<2			
TP-SS-12	0-0.25		RI	<0.004	<0.004		0.14(1)	<0.004	<0.005		<0.004			
TP-SS-13	0-0.25		RI	<0.004	<0.004		6(1)	<0.004	<0.005		<0.004			
TP-SS-14	0-0.25		RI	<0.004	<0.004		0.42(1)	<0.004	<0.005		<0.004			
TP-SS-15	0-0.25		RI	<0.004	<0.004		1.6(1)	<0.004	<0.005		<0.004			
TP-SS-16	0-0.25		RI	<0.004	<0.004		0.16(2)	<0.004	0.025		<0.004			
TP-SS-17	0-0.25		RI	<0.004	<0.004		0.089	<0.004	<0.005		<0.004			
TP-SS-18	0-0.25		RI	<0.04	<0.04		1.6(2)	<0.04	<0.05		<0.04			
TP-SS-19	0-0.25		RI	<0.004	<0.004		1(2)	<0.004	0.042		<0.004			
TP-SS-20	0-0.25		RI	<0.04	<0.04		0.32	<0.04	<0.05		<0.04			
TP-SS-21	0-0.25		RI	<0.04	<0.04		0.88(2)	<0.04	<0.05		<0.04			
TP-SS-22	0-0.25		RI	<0.04	<0.04		3.4(2)	<0.04	<0.05		<0.04			
TP-SS-23	0-0.25		RI	<0.2	<0.2		1	<0.2	<0.25		<0.2			
TP-SS-24	0-0.25		RI	<0.08	<0.08		1.4	<0.08	<0.1		<0.08			
TP-SS-25	0-0.25		RI	<0.08	<0.08		6.5(2)	<0.08	<0.1		<0.08			
TP-SS-26	0-0.25		RI	<0.2	<0.2		5.3(2)	<0.2	<0.25		<0.2			
TP-SS-27	0-0.25		RI	<0.08	<0.08		1.9	<0.08	<0.1		<0.08			
TP-SS-28	0-0.25		RI	<0.04	<0.04		0.55	<0.04	<0.05		<0.04			
TP-SS-28	1		RI	<0.004	<0.004		0.042	<0.004	<0.005		<0.004			
TP-SS-29	0-0.25		RI	<0.004	<0.004		0.077	<0.004	<0.005		<0.004			
TP-SS-30	0-0.25		RI	<0.004	<0.004		0.68(2)	<0.004	0.02		<0.004			
TP-SS-31	0-0.25		RI	<0.08	<0.08		1(2)	<0.08	<0.1		<0.08			
TP-SS-32	0-0.25		RI	<0.004	<0.004		0.57(2)	<0.004	0.02		<0.004			
TP-SS-32	1		RI	<0.004	<0.004		0.066	<0.004	<0.005		<0.004			
TP-SS-33	0-0.25		RI	<0.004	<0.004		0.97(2)	<0.004	<0.005		<0.004			
TP-SS-34	0-0.25		RI	<0.04	<0.04		1.6(2)	<0.04	<0.05		<0.04			
TP-SS-35	0-0.25		RI	<0.4	<0.4		370(2)	<0.4	<0.5		<0.4			
TP-SS-35	1		RI	<0.4	<0.4		36(2)	<0.4	<0.5		<0.4			
TP-SS-36	0-0.25		RI	<0.08	<0.08		9.1(2)	<0.08	0.22		<0.08			
TP-SS-37	0-0.25		RI	<0.02	<0.02		7.6(2)	<0.02	<0.025		<0.02			
TP-SS-37	0-0.25	TP-SS-137	RI	<0.02	<0.02		3.9(2)	<0.02	<0.025		<0.02			
TP-SS-38	0-0.25		RI	<0.2	<0.2		32(2)	<0.2	<0.25		<0.2			
TP-SS-38	0-0.25	TP-SS-138	RI	<0.2	<0.2		28(2)	<0.2	<0.25		<0.2			
TP-SS-39	0-0.25		RI	<0.2	<0.2		49(2)	<0.2	3		<0.2			
TP-SS-40	0-0.25		RI	<0.004	<0.004		1.1(2)	<0.004	<0.005		<0.004			
TP-SS-40	1		RI	<0.08	<0.08		4.9(2)	<0.08	0.1		<0.08			
TP-SS-41	0-0.25		RI	0.014(1)	<0.004		<0.008	<0.004	0.03(1)		0.015(1)			
TP-SS-42	0-0.25		RI	<0.004	<0.004		<0.008	<0.004	<0.005		<0.004			

Note The data in the soil data tables were compiled from electronic files of the summary tables in reports such as the Remedial Investigation. Geomega is currently using the original analytical laboratory sheets to perform a QA check on the database and fill in detection limits where there is currently a value of "ND" or "BDL" in the database.